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THE

ART OF TEACHING,

COMMUNICATING INSTRUCTION,

EXAMINED, METHODIZED, AND FACILITATED;

AS WELL AS APPLIED

TO ALL THE BRANCHES

OF

SCHOLASTIC EDUCATION.

BY DAVID MORRICE,

TEACHER OF THE LATIN, GREEK, AND FRENCH LANGUAGES; WRITING, ARITHMETIC, BOOK-KEEPING, GEOGRAPHY, HISTORY, &c. &c.

Nulla ad aures noſtras vox impune *perfertur.*

SENECA.

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1801.

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NOV. 2, 1983

DEDICATION.

TO THE REVEREND

THOMAS RENNEL, D. D. F. A. S.

MASTER OF THE TEMPLE,

AND

TO THE REVEREND

WILLIAM WHITELOCK, M. A.

MASTER OF THE ACADEMY, IN SOHO SQUARE, AND SUCCESSOR TO THE REVEREND DR. BARROW.

GENTLEMEN,

HAVING been honoured with your joint permiſſion to dedicate a Work to you, ſo ſtrongly ſanctioned by your approbation, than which nothing can be more flattering to its author; I take this public opportunity of returning you my warmeſt thanks for your favorable opinion and countenance.

I have conſidered it as my duty, Gentlemen, to dedicate this Work to you, for the following reaſons;

TO DR. RENNEL;

BECAUSE he has ſo ably urged the increaſing neceſſity of paying the greateſt attention to Religious Inſtruction in ſchools, and recommended the principle which forms the baſis of my plan of teaching, *viz.* the *connecting* the ſtudy of the SCRIPTURES with the other branches of education, and making all other learning, as much as poſſible, ſubſervient to religion and morality:—and

TO MR. WHITELOCK;

BECAUSE, being at the head of the *firſt* academy in London, I conceive him to be the moſt competent judge of a practical work, that he has taken the trouble to give a thorough conſideration to, previous to his hazarding an opinion; which, added to that of the Rev. Dr. HAMILTON,

HAMILTON, the late head of another eminent ſeminary, will, I truſt, leave no doubt in the public mind, as to the extenſive utility of this publication.

Without entering into the hackneyed ſtrain of fulſome panegyrick, ſo common to Dedications in general, permit me, Gentlemen, thus publickly to expreſs my earneſt hope, that you may long continue ornaments to the ſacred profeſſion which you have embraced, and in which your uſeful labours, whether in the pulpit or in the academic chair, will, no doubt, be particularly exerted at this critical period, to cruſh the growing but fallacious principles of a miſtaken philoſophy, now too generally oppoſed to the ſound and well-tried doctrines of divine revelation; and the contaminating *poiſon* of that conſequent tendency to political ANARCHY, which has but too well ſucceeded in its baneful effects, in a neighbouring country.

NOW is the preſſing moment, moſt loudly demanding a more than ordinary attention to the *religious* inſtruction of YOUTH, and the impreſſing

impreſſing their minds with right principles—eſpecially with love for their country, and loyalty to their KING.

I have the honour to be,

With the greateſt reſpect,

GENTLEMEN,

Your moſt obedient and

Much obliged humble ſervant,

DAVID MORRICE.

PREFACE.

PREFACE.

THE grounds upon which I venture to offer the following Work to public attention, are theſe:

I. My having been regularly brought up a teacher, with no inconſiderable care beſtowed on my education, and further improved by two years ſtudy of divinity. My having taught in ſeveral of the moſt eminent academies in and about London, for the laſt twenty-five years; among which I number Dr. Rutherford's of Uxbridge—Dr. Hamilton's of Leman-ſtreet, London—Dr. Anderſon's of Hammerſmith—and Mr. Kelly's of Finſbury-Square—added to much practice as a private tutor—a reſidence of ſome time in PARIS—and a pretty general knowledge of public and commercial buſineſs.

II. My having ſubmitted the Work to the examination and opinion of many of the firſt

maſters of academies in London (ſome of them being alſo clergymen) as well as other gentlemen, by whom it has been highly approved, as a few of their annexed written teſtimonies will ſhew.

In a converſation I had ſome weeks ago, with the Rev. Mr. Whitelock, maſter of the eminent and long eſtabliſhed academy in Soho-Square, who has taken the trouble to examine the Work with attention, and has done me the honour to favour it with his compleat approbation, he mentioned to me, that the Rev. Dr. Rennel, maſter of the Temple, had ſome time ago, (June 6, 1799), delivered a diſcourſe at St. Paul's Cathedral, before the Society for promoting Christian Knowledge, which he conceived would be a moſt *powerful* recommendation to my work, as it went to enforce the very point that I have principally kept in view throughout it, *viz.* the conſidering religious inſtruction as the chief object of education, and the making all other learning as much as poſſible ſubſervient to it, by connecting religious and moral obſervations with the ſtudy of the ſciences, and thoſe other branches which are ſuſceptible of it, or capable of being ſo applied.

Upon

Upon this ſame principle I have gone ſtill further, and have recommended the propriety, as well as pointed out the method, of extracting from ſome particular branches, a knowledge of others; ſuch as *geographical*, *aſtronomical*, *chronological*, and *hiſtorical* information, from the alluſions to theſe ſciences that are continually occurring in the CLASSICAL authors; for further particulars of which I refer the READER to p. 232, and following; where it will alſo be ſeen, that from the *opinions*, *traditions*, and *records* of their days, I have drawn concluſions favourable to the authenticity of the SCRIPTURES, and the *truth* of the CHRISTIAN RELIGION; nor, perhaps, would it be going too far to argue, that *their* traditions, in reality, derived their origin from the ancient part of the SACRED VOLUME itſelf.

In conſequence of Mr. Whitelock's ſuggeſtion, I ſent the Work to Dr. Rennell, who, upon an interview, expreſſed himſelf highly pleaſed with it, and ſaid more in its praiſe than would become me to repeat here; concluding with obſerving, that he ſhould make a point of recommending it.

Though but an obſcure, unſupported individual, it will, nevertheleſs, give me the moſt heart-felt pleaſure, if this IMPROVED PLAN OF TEACHING, combining religious inſtruction with the ſtudy of the claſſics and the ſciences,

ſhould, in the ſmalleſt degree, tend to extend the principle, and aſſiſt the laudable views of the SOCIETY FOR PROMOTING CHRISTIAN KNOWLEDGE, or ſecond the ſtrong recommendation and arguments, ſo ably urged by Dr. RENNEL, in favour of greater attention being paid in public ſchools to religious knowledge: upon which head, I here quote the notes to his maſterly ſermon before alluded to, and alſo two ſhort paſſages from the diſcourſe itſelf—the *principle* of which, is highly worthy the immediate and *decided* adoption of every PARENT and TEACHER of the UNITED KINGDOM.

"Another circumſtance of the times which renders the labours of this Society of peculiar exigency, is the moſt lamentable and notorious defectiveneſs of Chriſtian education in many of our public ſchools, and other great ſeminaries of this nation *.

A cer-

* "The *general* ſtate of public education in this country, with regard to religion, appears to require much attention. We cannot but lament, that in *very few* of our beſt endowed ſeminaries, the ſtudy of Chriſtianity has that portion of time and regard allotted to it, which the welfare of ſociety, the progreſs of deluſive and ruinous errors, and the true intereſt of ſound learning itſelf, ſeems at the preſent time, *peculiarly* to call for. In *ſome* of them, and thoſe not of *ſmall* celebrity or importance, *all* conſideration of the revealed will of God is paſſed over

" A certain fooliſh and foppiſh opinion, derived from, and immediately connected with modern

over with a reſolute, ſyſtematic, and contemptuous neglect, which is not exceeded in that which the French call their *national inſtitute*. And yet with every branch of learning, the ſtudy of the Holy Scriptures is cloſely connected: with hiſtory, chronology, criticiſm, and morals, none of which, if the Bible be excluded, can be carried to their full perfection. How far thoſe, whoſe occupation it is to form the national taſte can be warranted, even in *this* point of view, in ſuch conduct, may be collected from ONE, whoſe opinion on every ſubject relating to polite literature is deciſive.—' The collection of tracts, which we call, from their excellence, the Scriptures, contain, independently of a divine origin, more *true ſublimity*, more *exquiſite beauty, purer morality*, more *important hiſtory*, and *finer ſtrains both of poetry and eloquence*, than could be collected within the ſame compaſs from all *other books* that were ever compoſed in any age, or in any idiom.'——Sir WILLIAM JONES's *Eighth Diſſertation in the Aſiatic Reſearches*.

" The conſequence of this neglect will be, as indeed is already evident, that *learning itſelf* deprived of the bleſſing of Almighty God, and having loſt its main pillar, his fear and ſupport, muſt rapidly decline. Indolence and diſſipation, even in *theſe* retreats, will have their perfect work, and, in a ſhort period, even the very *form* and *external* appearance of diſcipline and inſtruction will periſh. *Induſtry* and *dignity* in thoſe who *teach*, and *ſubordination* and *modeſty* in thoſe who *learn*, cannot long ſurvive the PRINCIPLE, which alone gives permanency to them all.

But, in the preſent moral and political ſtate of human affairs, the conſequences are *immediately* alarming. Young men of rank and talents are diſmiſſed into the world, without *one ſingle* ſafeguard againſt thoſe plauſible and tremendous theories, which

modern philoſophy, has lately gone forth, that religion is the buſineſs of *maturer* years only; and that early culture is productive not of rational conviction, but of blind prejudice. I can ſcarcely be of opinion, that we ſhould admire and imitate the wiſdom of the huſbandman, who ſhould *ſow* his *ſeed* at the ſeaſon, when it is time to *reap* the *fruits*. To the refined folly of the propagators of this maxim, we may confidently oppoſe the plain and practical words of Scripture, '*Train up a child in the way that he ſhould go, and when he is old he will not depart from it.*"

have turned more than one quarter of the world into an Aceldama, or field of blood! Of religion, its evidences, doctrines, and motives, they are utterly and groſsly ignorant: no check, therefore, reſtraint, or corrective, is afforded from thence; they are therefore, not unfrequently, hurried on by heated imaginations and enflamed pride, *aggravated* rather than *controuled* by the learning they have acquired, to turn the arms of eloquence and genius to the ſubverſion of order, and the deſtruction of their native country. Young men in this ſituation are not unemphatically deſcribed by *Cicero*:—"Quà cæcitate homines, cum quædam etiam præclara cuperent, eaque *neſcirent* nec ubi, nec qualia eſſent, *funditus alii everterunt ſuas civitates*, alii ipſi occiderunt. Atque hi quidem *optima* petentes, non tam *voluntate*, quam *curſus errore* falluntur."—*Cicero Tuſc. Quæſt.*

Copy

Copy of a Letter from the Rev. Dr. HAMILTON, *Vicar of* St. Olave, Jewry; *and late Maſter of the Academy in Leman-Sreet—to the* AUTHOR.

"SIR,

Leman-Street, Jan. 1, 1801.

"FROM circumſtances which I mentioned to you, my time has been ſo much occupied, that I could only look over your book, entitled "The Art of Teaching," &c. in the moſt curſory way, and therefore am little prepared to give an opinion upon it.

"From what I ſaw, however, I think that it will afford very profitable hints to TEACHERS of *both ſexes*; that it will be of conſiderable ſervice to PARENTS, and form an uſeful companion to thoſe who ſtudy without a maſter; and, that it deſerves eſpecial commendation, for its tendency to enforce in education, attention to good morals and religion.

"I remain,

"SIR,

"Your obedient ſervant,

"R. HAMILTON."

Copy of a Note from Mr. JOSHUA COLLIER *of Leadenhall-Street, Author of* "A Defence of Double Entry," *and other Publications.*

"JOSHUA COLLIER has not given the work ſo much attention yet, as it ſeems to deſerve; when publiſhed, he begs to have a copy, in order to avail himſelf of the uſeful hints which are given in it, with much correctneſs and plainneſs; he admires alſo the ſpirit with which the author has conducted it."

Copy of a Letter to the Author from the Rev. Mr. WHITELOCK, *Maſter of the Academy in Soho-ſquare, and Succeſſor to the Rev. Dr. Barrow.*

"DEAR SIR,

"As you were pleaſed to favor me with a peruſal of your book, requeſting me at the ſame time candidly to ſtate to you my opinion as to its merit: I have the happineſs to inform you, that its nature and plan are ſuch as moſt juſtly entitle it to my commendation. I have long been convinced that ſome treatiſe of a ſimilar deſign with the preſent, was much wanted in the important buſineſs of education, and I am happy to find that a perſon ſo well qualified for the undertaking, has at length been found, to come forward

forward to favor the public with a Work ſo replete with uſeful inſtruction. There is one circumſtance in your ſyſtem with which I am more particularly gratified, and that is, your blending the principles of religion with the different branches of education; a practice which I am ſorry to obſerve, is generally neglected not only in our PUBLIC SCHOOLS, but what is of more ſerious conſequence, in our UNIVERSITIES."

"That your publication may meet with that encouragement and ſupport, which it ſo juſtly merits from every true friend to the deareſt and beſt intereſts of ſociety, is,

"DEAR SIR,

"The ſincere wiſh of

"Your humble ſervant,

"W. WHITELOCK."

Soho-Square,
Feb. 5, 1801.

---

†‡† Mr. Morrice propoſes to board and educate in an airy ſituation at the Weſt end of the Town, TWELVE YOUNG GENTLEMEN *only*, upon the plan of this work. Letters or meſſages addreſſed to him at Mr. Hatchard's, bookſeller to her Majeſty, Piccadilly, at Tabart's Juvenile Library, No. 157, New Bond-Street, or at Rich-

Richardſon's, Cornhill, will be reſpectfully attended to, and the parties waited upon if neceſſary, or anſwered by letter.

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PRIVATE TEACHER.

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ERRATA.

Page	1,	line 1,	*for* frequently	*read* often
	5,	22,	*for* further	*read* alſo
	8,	27,	*for* obſerve	*read* remark
	10,	2,	*for* ſhould	*read* could
	38,	laſt,	*for* nothing	*read* under
	41,	6,	*for* where	*read* who
		7,	*dele* they	
	52,	10,	*for* lays	*read* lies
	69,	7,	*for* well educated young men	*read* young men of education
	83,	18,	*for* give	*read* gives
	102,	11,	*after* know	*add* that
	105,	18,	*for* Teachers	*read* Teacher
	111,	16,	*dele* of land	
	133,	9,	*dele* riſe	
	165,	20,	*dele* zounds and fury! &c. the whole line	
	174,	20,	*for* forty-five	*read* fifty-eight or ſixty
	186,	15,	after Eton	*read* and in
	191,	25,	after 3 ;	*read* adding
	211,	22,	*for* é	*read* è
	220,	20,	*for* immutilated	*read* unmutilated
	223,	23,	even *to be read before* mentioned	
	229,	laſt but one,	*after* prefect	*add* or king
	248,	20,	*for* o ſong	*read* ô ſong
		23,	*for* o ſongs	*read* ô ſongs
	253,	20,	*after* Eutropius	*dele* and
	257,	21,	*for* he	*read* the teacher
	267,	13,	*for* Lexcon	*read* Lexicon
	271,	16,	*add* "I do not mean to compare them in point of elegance, but merely in their names,"	
	281,	1,	of article 10, *for* crotched	*read* crotchet
	288,	6,	after more	*read* of it
	291,	22,	*for* is	*read* be
	297,	21,	*for* double entry	*read* ſingle entry
	307,	articles 18 and 19 ſhould be reverſed		
	328,	4,	*after* this	*read* ſea
	329,	laſt	*perhaps*, to come in after the word *and*, in the line before	
	330,	4,	*for* as	*read* man
	370,	21,	*after* meaning	*read* among the Jews

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ERRATA.

Page 370,	line 23,	*for* ninth	*read* month
370,	16,	*for* it	*read* the commentaries
397,	17,	*for* it	*read* them
044,	25,	*for* latter	*read* later
407,	7,	*after* lines	*read* and
418,	13,	*for* perſued	*read* purſued
420,	13,	*after* reſiſt	*read* by land
437,	27,	*for* poiwer	*read* power
442,	23,	*for* means	*read* method
470,	1,	*for* principal	*read* principals
		for has	*read* have

*** The Author will be very much obliged to any Lady or Gentleman, who will take the trouble to communicate hints to him for the improvement of this Plan, or point out any inaccuracies in the work that may ſtrike them. Letters addreſſed to him, at Lackington, Allen, and Co.'s Finſbury-Square, and at Hatchard's, Piccadilly, or Richardſon's, Cornhill, will be eſteemed a favour.

THE

INTRODUCTION.

IT has frequently remotely occurred to me in the courſe of twenty-five years experience in teaching, that a ſomething I could not exactly account for to myſelf was wanting to promote a more certain, eaſy, and ſyſtematic method of inſtruction, than what I have hitherto obſerved to prevail in academies, and among teachers in general.

This idea repeatedly recurring to me, has led me, from time to time, to examine what that deficiency could be, of which I was diſtantly ſenſible, without then diſtinctly comprehending what it was.

I have, however, lately given a good deal of attentive conſideration to the ſubject, and from encreaſed experience and maturer thought, added to ſome recent ideas that have very forcibly ſtruck me, on taking upon me the private tuition of two young gentlemen who are ſtudying the claſſics at a great public ſeminary, I am now fully convinced (and I truſt I ſhall be able to convince others alſo,) that rules for facilitating the communication of inſtruction, founded upon experience and an attentive obſervation of

the moſt ſucceſsful plans of teaching, methodically laid down, and ſyſtematically acted upon, will have the effect not only of rendering more eaſy, but actually improving the ſcience or art of teaching; for an art it certainly is, and not an eaſy one to attain, at leaſt to that perfection which the general importance of its object requires.

It is an art that muſt be learned by a long apprenticeſhip; by much ſubſequent practice, experience, and attentive obſervation, added to great evenneſs and command of temper; with much zeal, patience, and perſeverance in the undertaking: it requires a mind free from, or at leaſt not much embarraſſed or hurt by the uſual diſtractions of care and buſineſs.

It is not always the greateſt ſcholars, or the moſt learned maſters, that make the beſt teachers, or poſſeſs the art of imparting their knowledge with the greateſt facility; and this, I believe, will be granted by all thoſe who have any connexion with gentlemen of the ſcholaſtic profeſſion, or who are in any degree converſant in the buſineſs of education.

There is a certain winning confident addreſs, engaging manner and method requiſite to form the complete teacher; which is only to be attained by a general knowledge of the world, as well as of books, added to a ſtrict and conſcientious diſcharge of his duty, good-nature, and

and an almoſt total devotion to the important buſineſs he is engaged in: his knowledge of the art may, however, certainly be improved by ſalutary well adapted rules, grounded upon, perhaps, *more* experience than his years have enabled him to acquire.

In the courſe of my connexion with gentlemen employed in the education of youth, I have frequently ſeen a moſt excellent writer unſucceſsful in teaching writing well himſelf; becauſe he has either been at a loſs methodically to communicate his art in that engaging, pleaſing, winning way, by which it is poſſible to be effectually done; or becauſe he has paid more attention to the diſplay of his own ſuperior writing, than to the improvement of his pupil; or becauſe he has been careleſs and indifferent, and not conſcientious in the diſcharge of his duty: one of theſe three reaſons muſt have been the cauſe; two of them are wilful impediments; the third is what I aim at remedying. I have found the ſame obſervation to hold good with reſpect to teachers in almoſt every other branch of education.

In order to ſet this aſſertion in a clearer point of view, I mean in the arrangement of the work before us, to point out ſome of theſe deficiencies in the method of conveying inſtruction, and compare them with thoſe rules and obſervations which I ſhall propoſe as a guide,

founded upon the general plan I am about to recommend; not meaning, however, to inſinuate, that the ſame plan is not already often acted upon by many teachers; but to affirm, that there are ten to one who do not act upon it, either becauſe they do not know *how*, or, what is the moſt probable, becauſe they are not acquainted with the principles of it. It is principally for the guidance of ſuch teachers that this work is undertaken, and that the books which I have found in the courſe of my teaching to be the beſt adapted to the attainment of the ſeveral branches will be recommended; and though I am well aware that there is a numerous catalogue of eſſays and ſtrictures on education extant, and which is daily encreaſing, I do not recollect to have heard of one attempt towards methodizing and facilitating the Art of Teaching itſelf, of which theſe eſſays are only outlines; but certainly very proper in their places, and commendable as to their object: plans of education and teaching are, however, two diſtinct objects.

I have, at various times, peruſed moſt of the writers on education, both ancient and modern; and none with more pleaſure than ROUSSEAU and ROLLIN: I do not mean, however, in this work to borrow my ideas from any writer on education; but confine myſelf, as much as the nature of the ſubject will enable me, to the

practical

practical part of teaching only, founded upon my own perſonal experience and obſervation; which I flatter myſelf (on the grounds I have ſtated to the public by way of Preface) I am enabled to do, with ſome proſpect of good effect to parents, pupils, and the profeſſion.

After I had nearly compleated this work, I was informed by a female friend, that Miſs and Mr. Edgeworth had lately jointly publiſhed a work, in two volumes quarto, on the ſubject of Practical Education; and that it approached the neareſt to my plan of any ſhe had ſeen: curioſity of courſe led me to examine it, but I found nothing in it that ſtruck me ſo forcibly as to induce me to alter one line of my own, or to copy a ſingle obſervation from it: not that I mean to inſinuate, that the work has not merit, for I really think it has; but only to obſerve, that our plans are quite different: their's applies only to the initiatory part of education; mine extends much further.

But to proceed: it may be proper further to obſerve, that the books already publiſhed on the ſubject of education rather point out WHAT *ſhould* be taught, than *how* to teach what they recommend; the one is Theory, the other Practice: it is the latter I aim to facilitate and improve; and this will conſequently intereſt the governeſs and female teacher, as well as the maſter of the academy and his aſſiſtants, the

private tutor or teacher, the parents, the guardians, and the friends in general of the youth of both ſexes.

It is uſual to obſerve of a ſucceſsful maſter, that he has an excellent plan, a good method of teaching, or communicating inſtruction; why not then make the principles of his good plan or method general; or at leaſt endeavour ſo to do, by collecting, digeſting, and laying down ſuch rules for teachers to act by; and ſo to concentrate, and bring into one focus, the ſubſtance of the various good methods which maſters purſue, as may be moſt likely to have the proper effect, to render their inſtructions equally ſucceſsful? That attempt is the aim of the following pages; and I flatter myſelf the work will prove a uſeful guide to young and inexperienced teachers, whoſe years have not yet thoroughly qualified them for the important taſk; as well as to parents who undertake the education of their own children; and to grown perſons who may be under the neceſſity of ſtudying without a maſter.

With reſpect to pointing out the proper means of preſerving and improving the health, or adding to the perſonal qualifications of young people, that is not my object; it is the culture and improvement of the mind, through the medium of their maſters, that I aim at; and my work rather concerns the teacher than the pupil.

pupil. There are already extant numerous publications on the former of theſe objects, written by men far more capable than myſelf, but who probably are not ſo well acquainted with the Practice, as the Theory of education and teaching

I have alſo ſubjoined to this work, a Practical Eſſay on Education in general, grounded upon my own actual experience, in various ſituations as a teacher; and I have added to it ſome uſeful hints to parents and maſters, reſpecting the youth of both ſexes brought up at boarding ſchools: I have likewiſe added ſome remarks on the ſubject of uſhers and female teachers in ſchools, tending, I hope, to benefit both them and their employers; by pointing out the means of *facilitating* their duties, rendering their ſituations more *reſpectable*, and their inſtructions to their pupils conſequently more *effectual* than they generally are.

My obſervations on this ſubject are the reſult of much attention to it; and I truſt my remarks will be of ſervice both to the maſter and his aſſiſtant. Without making any invidious reflections on the ſubject, there is certainly ſomething amiſs in the preſent relative ſituation of maſter and aſſiſtant; and it ought to be remedied.

Having had ſeveral opportunities of witneſſing the careleſs method in which young gentle-

men in the navy are taught, I have thought it right to give that ſubject a place in this work alſo.

I have likewiſe laid down ſome rules and obſervations, for the guidance of young or grown perſons ſtudying without a maſter, as there are many people, who in long voyages, in the privacy of retirement, or under other circumſtances, would wiſh to begin and continue a courſe of ſtudy, if they had a proper guide, and a liſt or aſſortment of the books applicable to the particular branches they wiſh to learn, pointed out to them. Above all, though laſt not leaſt in importance, I have devoted one entire ſection of my work to the article of RELIGION; endeavouring to point out, with as much clearneſs and perſpicuity as poſſible, the means by which the knowledge and worſhip of the DEITY, founded upon the ſtudy of the Scriptures, and the obſervation of his works, may in the moſt pleaſing way, and with the moſt effectual ſucceſs be conveyed to, and impreſſed upon the youthful mind: and here I muſt obſerve with ſincere regret, that too little attention is in general paid to this, the moſt important end of all education, to know and reverence GOD.

To conclude: I muſt obſerve to my readers, that I have endeavoured, as much as poſſible, to avoid all prolixity and unneceſſary detail. I have compreſſed in as ſmall a compaſs as poſſible

ble the ſpirit and ſubſtance of my meaning in every rule that I have laid down, or remark that I have made; wiſhing rather that the quality than the quantity of the work ſhould be commended: and it may not be improper alſo to add, that as I have taken my ideas from no other ſource but that of my own obſervation and experience, (except a few trifling quotations, principally from *Locke* on Education,) and that having juſt written as the ſpirit of the ſubject dictated, and the ardour I feel in it guided me, I have not attended ſo much to language and grammatical niceties, as if I had written on a ſubject that leſs intereſted my feelings, and engaged my heart: the ſame apology muſt alſo ſerve for any repetitions I have uſed in the courſe of the work, or for whatever improprieties may appear in the arrangement of it; requeſting it alſo to be underſtood, that while in the courſe of it I ſpeak of the male parent, teacher, or pupil, I alſo include the female; at the ſame time making my remarks as general as the nature of the ſubject will admit.

As I conſider this publication as only the out-lines or ground-work of a plan of teaching, which in abler hands might be very extenſively enlarged and improved upon, I wiſh it to be viewed in that light; as from the nature of my employment, my time is ſo taken up, and my mind ſo cloſely engaged, that it is impoſſible for

for me to do that juſtice to the ſubject which I ſhould wiſh, and the extreme importance of it requires.

If it ſhould be ſuggeſted that I have treated it ſuperficially, I muſt obſerve to the candid reader, that it is a ſubject I could not enter deeper into, without ſpinning out the work to a very conſiderable length: it reſts with the teacher, from the hints or clue given him under the ſeveral heads, to branch out, enlarge, and follow in detail the track I have attempted to point out and render ſerviceable to him.

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THE

ART OF TEACHING.

CHAPTER I.

SECT. I.

Of Teaching, or the Communication of Inſtruction in general.

I NEED not inform my readers, that to teach, means to convey to and impreſs upon the youthful mind, through the medium of that organ of the body, called the *ear*, and by means of ſpeech and language, of which the tongue is the organ, whatever you wiſh it to retain, or keep in the memory, which is one of the ſenſes, whoſe action depends upon, and flows from the impreſſions made on the mind; which, when young, is very aptly compared to white paper, or wax, capable of receiving any impreſſion; or to a young twig, which may be ſo bent, as to grow in any form you pleaſe to give it: thus the communication of inſtruction is perfectly a *mechanical* proceſs, the teacher operating on the mind

mind of his pupil, through the medium of the bodily organs.

There is alſo another mode of teaching, which is performed or conducted by means of the eye or ſight, another of the organs of ſenſe; conveying more rapidly to the mind, or centre of thought, than the ear, the objects which are deſigned to be impreſſed upon it; and, *unfortunately* for youth, thoſe which are not, or at leaſt ought not.

Through the medium of the eye and the ear then, all inſtruction is communicated to the mind, which is the director and moving principle of the body and its actions, as God is of the univerſe.

Through the medium of the eye inſtruction is alſo conveyed in a kind of mechanical way to the mind by books, which are ſubſtitutes, and a means of relief to the teacher, as well as a practical guide and exerciſe to the more advanced pupil.

The little, and almoſt inſenſible impreſſions, made on our tender infancies have very important and laſting conſequences; and that being the caſe, it muſt be obvious to parents, teachers, and every perſon placed about youth, that, "*not a ſound or ſingle word reaches the youthful ear in vain:*" whatever it is, good or bad, darted with unerring force, it is almoſt indelibly, and for ever fixed there; it can never be recalled.

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The ſame effect alſo has the force of perſonal example, good or bad: conveyed with ſure effect to the mind, through the medium of the eye: it there faſtens, rivets itſelf; and not all the power of human ſkill can raze it out, or obliterate the deep impreſſion made; deeper far than that effected through the medium of the ear, and more rapid in its paſſage to the tender mind.

Such alſo is the effect of books and pictures, whether good or bad; rapid as lightning the impreſſion; ſure and effectual the marks they leave.

Parent! Teacher! Reader! whoever thou art, here pauſe a moment, and reflect:—upon theſe three points the fate of the youthful pupil, the future Man or Woman hangs:—Hearing, Seeing, and Example, are either to prove his bane or happineſs: "*Education,*" (ſays Dr. Johnſon,) "*decides the fate of empires.*" It is your province to nurſe and rear the tender thought to reaſon, to goodneſs, to virtue, and then to fame. Oh! ſully not yourſelves, and never tamely ſuffer to be ſullied, the fair virgin white of the youthful mind, with improper diſcourſes, improper books, or improper example; the conſequences are incalculable.

In wrong firſt principles almoſt all our ſubſequent errors originate; but ſometimes the beſt fixed principles will degenerate, by the force of bad

bad example, want of thought, and other circumſtances in after-life: in this, however, we can never err—to give the mind early the beſt impreſſions it is capable of at the time:—we muſt leave the reſt to Providence, and the effects of progreſſive reaſon.

It is with the ſincereſt ardour and earneſtneſs of heart that I entreat parents and teachers to give theſe primary obſervations their due weight and attention; they are the firſt principles, the leading features of my ſyſtem, and the plan I am about to recommend: without a proper attention to them, all I have to ſay hereafter will be of little avail; it is the baſis on which is built the ſtructure of all right education.

Let neither parent, maſter, or teacher, if they know it, ſuffer for a moment to be near their riſing offspring or advancing pupils, the vicious, irreligious, or *unconſcientious* character; it will be poiſon, and worſe than poiſon, to the vegetating, growing mind.

The nature, quality, and quantity of the inſtruction given, is generally proportioned to the age and abilities of the pupil: by abilities we mean the ſtrength, aptneſs, and quickneſs of the mind, in receiving, through the medium of the ear, and retaining, the impreſſions intended to be made upon it. The bodily organs of ſome children are ſo formed, and their whole frame is ſo torpid and inert, that the mind being

being conſequently affected by it, cannot receive the impreſſions intended to be made, with that alertneſs, clearneſs, and rapidity that others can. The mind and body are ſo cloſely connected in their operations, that whatever affects the one, in ſome degree generally affects the other; and in the caſe juſt mentioned, we term the defect ariſing from the cauſes I have ſtated, ſlowneſs and ſtupidity; which, as they grow up, will frequently wear off, and they will become briſk, lively, and capable of receiving impreſſions with the greateſt facility.

It ſhould always be conſidered, as I have juſt obſerved, that the mind and body are ſo nearly allied by the nature of their ſtructure, as that a heavineſs and deficiency of the bodily organs will extend itſelf to and affect the mind; but not ſo much in grown perſons as in the young. Allowances ſhould be therefore always made by parents and teachers for this natural defect in children; and they ſhould wait with patience for the change that not unfrequently takes place, much to the advantage of the child, and their own relief.

Inſtruction, or the impreſſions intended to be made upon the mind, may be communicated through two mediums, that of the ear and the eye; at firſt by verbal communication, or converſation; and when the pupil has learned to read,

read, and know the uſe of books, the eye then becomes a ſubſtiſtute for the maſter and the ear.

As young minds are naturally weak, volatile, and unſteady, it is neceſſary to uſe means the more readily to induce them to receive inſtruction, or the impreſſions you wiſh to make on their minds; and that is to be done in two ways: 1ſt. By kindly and ſkilfully attracting their attention; or, 2d. By compelling them to it through fear of puniſhment: natural curioſity will ſometimes lead them on, and often an early deſire to learn; but where neither of theſe motives operate very forcibly, one or the other of the before mentioned methods muſt be reſorted to; and it is evident, that he who incites and ſtimulates his pupil in the moſt pleaſant way to the child himſelf, muſt ſtand the beſt chance of gaining his attention, and conſequently, with the greater facility impreſſing his mind in the way he would wiſh: this is the firſt, and the moſt important ſtep towards making a good teacher and a good ſcholar: it may be ſummed up in a few words, "*Gain your pupil's attention.*" Fear and terror hardly ever anſwer the purpoſe; fear diſtracts and confuſes the mind, by diſordering and weakening the tender nerves of children: conſequently it renders them incapable of continued attention; their thoughts

thoughts wander, and a dread hangs over their minds, which being often repeated, makes them hate both their teacher and their books.

The firſt of theſe incentives is, I believe, the moſt generally made uſe of, at leaſt with ſingle and very young pupils: in ſchools where large numbers of them are collected together, and their age has hardened and emboldened them, they muſt be kept under by fear, while they are at the ſame time attracted as much as poſſible, by mildneſs and perſuaſion. Some young minds are ſo tender, flexile, and well diſpoſed, that they are more eaſily worked upon by kindneſs, than by harſhneſs; others are ſo hardened, rough, and ill-diſpoſed, that nothing but downright fear, or the dread of certain puniſhment, will operate upon their ſtubborn natures. Some children are naturally vigorous, active, and lively in their bodily functions; clear, quick, and alert, in their mental faculties; ariſing no doubt from a duly balanced phyſical harmony, between the body and mind—other children are the very reverſe; ſlow, torpid, and inert in body, weak, confuſed and dull in mental comprehenſion; but that may be only temporary, and will frequently wear off as they grow up.

It is the parents' and teachers' buſineſs to examine theſe points well, and ſtudy the ground *(étudier le terrein)* which they are to cultivate and ſow, before they begin to put in

the ſeed; they ſhould watch, and acquaint themſelves with the particular temper, bent, and diſpoſition of the pupil; and that inſight is to be beſt obtained in his playful, unguarded moments, when he thinks himſelf unobſerved by their ſcrutinizing eye.

Let not parents or teachers deſpair of the dulleſt child:—the faculties, by proper treatment and attention, may open and brighten; the mind may by degrees expand itſelf, as the body dilates, increaſes in growth, and approaches to maturity.

There is a period of life, in which the youthful mind is in a full ſtate of bloſſom and expanſion; it may be early, it may be late; if too early, as I have frequently ſeen it to be the caſe, the bloſſom may be nipped and blighted before the fruit is ſet: wrong treatment, neglect, harſh language, the being cramped and fettered by rules not congenial to the particular bent of the mind, conduce to this diſappointment; and of children, whoſe faculties at an early age are particularly forward and mature, I have generally obſerved, that their lives are but of ſhort duration.

In children of ſlow capacities, the mental bloſſom unfolds by imperceptible degrees; but when once the period of which I ſpeak is arrived, the expanſion quickens its pace, the fruit is firmly ſet, the growth becomes rapid, ſure, and

and ſafe; and full maturity the conſequence: there are exceptions to this obſervation; but in general it holds good.

I have ſeen the moſt promiſing child, the moſt forward in capacity, either prematurely cut off, or afterwards turn out but a very indifferent ſcholar, and even below mediocrity; while the ſtupid, ſlow, and heavy boy, that had nothing promiſing in him, has, by degrees, with proper treatment and encouragement, unfolded his faculties, improved them by aſſiduity, and turned out a bright and ſhining man. Putting natural abilities out of the queſtion, proper attention in the parent or maſter, due diligence and aſſiduity in the child, with a combination of happy circumſtances together, have an aſtoniſhing effect and weight in the formation of the ſcholar; from whence it often ariſes, that the bloſſoms of the moſt ſhining talents and abilities, are never drawn out of the bud, or expanded by the kindly influence and nurture of proſperity; but lay torpid, inert, and loſt; while the buds of very indifferent and unpromiſing talents, by proper care, due attention, and the genial warmth of the ſun of proſperity, are attracted, drawn out, and expanded into full beauty; and vigorouſly proceed in their progreſs to maturity, with unimpeded effect.

There are ſome children, whoſe conſtitutions of body and mind, are ſo vigorous and well

framed by nature, that they do not ſtand in need of much aſſiſtance from others, but by the ſtrength of their natural genius, are from their cradle carried towards what is excellent, and by the privilege of their happy conſtitutions, are able to do wonders; but theſe examples are rare; and I think I may venture to ſay, that of all the men we meet with, nine in ten are good or bad, uſeful or not, by their education: it is that at leaſt, which makes the great difference in mankind.

Here let me obſerve, that parents commit great errors, in blaming maſters for the ſlow progreſs of their children, when they happen to be heavy and dull; for the maſter to avoid reproaches, and preſerve his credit, naturally hurries them on from one ſtep to another, without their having a proper foundation laid, or underſtanding what they have been thus precipitately carried through, in order to give them the *appearance* of having made ſome progreſs.

Teaching is now made ſo much a trade of, and many who are employed in it, are looked upon in ſo humble and even deſpicable a light, that it is almoſt become a mere ſervile traffic, very few making it a matter of amuſement, pleaſure, or *conſcience* to themſelves; without which, it is almoſt impoſſible to conduct it with effect. Whether this is the fault of parents, maſters, or the ſubordinate claſſes of teachers;

or

or one of thoſe unavoidable evils in ſociety which cannot be remedied, is difficult to determine; but from what I have myſelf obſerved, I believe that it *may* be remedied, and that all the three *deſcriptions* of perſons I have juſt mentioned, pretty equally contribute their ſhares towards it: the parent by *whim*, caprice, and overfondneſs for the child; the maſter by too much ſervility and complaiſance to the parent, and the very reverſe to his aſſiſtants; and the aſſiſtant, or ſubordinate teacher, by want of ſpirit, little irregularities of conduct, ignorance of properly communicating the art he profeſſes, and a dread of offending his employer by maintaining an independence of mind, and keeping up that proper conſequence, which his ſituation as a teacher requires; and without which all his endeavours to inſtruct, will be but weak and fruitleſs: But of this I mean to treat more fully towards the cloſe of the work.

Of the preſent methods of teaching, they are ſo various, and differ ſo much, according to the ſeveral opinions, ſituations, and circumſtances of parents, and the maſters whom they entruſt with the education of their children, that it would be impoſſible to point out and examine them all; therefore I ſhall confine myſelf to the moſt general errors that have fallen under my obſervation.

In purſuing the buſineſs of teaching, proper regard is not always paid to the child's capacity, diſpoſition, and other circumſtances, that ſhould be attended to, in order to make learning pleaſing and attractive to his tender mind. Fear and anger are made to incite and ſpur him on like a ſlave or a jaded horſe, inſtead of his being voluntarily attracted to it, by gentleneſs and ſoothing language. As children ſhould very ſeldom be corrected by blows, ſo I think frequent and paſſionate *chiding*, is of juſt as bad conſequence, as it leſſens the authority of the teacher, and the reſpect of the pupils; for they can very early diſtinguiſh between paſſion and reaſon, and will very naturally reverence what proceeds from the latter, and deſpiſe the former.

In teaching the ENGLISH LANGUAGE, which is the firſt thing the young pupil begins with after learning his letters, the uſual method is to make him read at all events, without ſufficiently grounding him in *ſpelling*, which is the baſis of the language; and without a thorough acquaintance with which, it is impoſſible to read or write it correctly. This is the firſt, and moſt material error committed by maſters, becauſe it leads eventually to the ſame incorrectneſs in other branches; and were they but fully ſenſible of the vaſt importance of attending to *firſt principles* in every thing they teach; and making a

conſcience

conſcience of grounding their pupils effectually in them, before they proceed further; there would not be half the trouble there is, to maſters who come after them, in eradicating the erroneous habits they have acquired, and putting them into the right way, I need not ſay *again*, for they never were in it.

I can ſafely aſſert, from long experience, that it is eaſier to teach *three* pupils who have begun in the proper way, than to cure *one* of the wrong habits he has acquired in ſpelling and reading, through the inattention and neglect of a former maſter.

Added to this error, that of ſuffering children to ſpell in a ſinging kind of voice, and read with a clowniſh, droning, or drawling tone, is a moſt material fault, and by many maſters paſſed over, without proper exertions to cure it. In reading, the hurrying through the points, without making the proper pauſes, is alſo too little attended to and corrected. I do not mean to ſay, that this is the caſe with every teacher; much the reverſe—there are many academies and day-ſchools of eminence, where the greateſt attention is paid to theſe points; but, in general, more care in that reſpect is wanting.

The making the Bible a common exerciſe-book for reading is improper, and is now very much exploded and diſuſed in ſchools; (nor ought it to be uſed as ſuch, by any but poor

children, whoſe parents cannot afford them a variety of books; but principally becauſe, as they grow up, they may not have time or opportunity to read it to much advantage;) not only becauſe in reading it, children are more apt to fall into tones, from the little variety there is in the ſubject and language; and from its being in general, either too affecting and ſingular in expreſſion, or poetical in compoſition; but becauſe it is too much above their comprehenſions, and in many reſpects unſuited to their age; not to mention the indifference and diſtaſte it gives them afterwards, by having been made too familiar with it, and the having been frequently puniſhed, for neglecting the leſſons aſſigned them in it: not only this, but they are apt to acquire ſuch erroneous ideas of God and religion, from continually plodding over it, before they have ſenſe and judgment enough to form a proper eſtimate of its value, and the ſacred truths it contains, that they are never effaced.

What an odd jumble of thoughts muſt a child have in his head, if he have any at all ſuch as he ſhould have concerning religion, who, in his tender age, reads all the parts of the Bible indifferently as the word of God, without any other diſtinction. I am very apt to think, that this in ſome men has been the reaſon, why they never had clear and diſtinct thoughts of it all their

their life-time. There are certainly ſome parts of Scripture, which may be proper to put into the hands of a child, to engage him to read, ſuch as the hiſtory of Joſeph and his brethren; of David and Jonathan; David and Goliah; Samſon and the Philiſtines, &c. and others that he ſhould read for his inſtruction; as that, "*What you would have others do unto you, do you* "*the ſame unto them*;" and ſuch other eaſy and plain moral rules, which being properly ſelected, might often be made uſe of both as exerciſes for reading, and leſſons of inſtruction at the ſame time: but the reading the whole Scripture indifferently, is certainly very improper for children, till, after having been made acquainted with the plaineſt and fundamental parts of it, they have gained ſome kind of general view of what they ought principally to believe and practice; which I think they ought to be taught in the very words of Scripture, and not in ſuch as men prejudiced by ſects and ſyſtems, analogies, and ſo forth, are apt in this caſe to make uſe of and in a manner force upon them.

The art of WRITING is the next branch in which the pupil is inſtructed, the groundwork of which is ſeldom well laid, and he is hurried on to write copies and ſcrawl exerciſes, before he can draw ſtraight or parallel ſtrokes, or even before he underſtands exactly what they mean: a careleſs and bad habit once acquired,

acquired, ſucceeding maſters find it almoſt impoſſible to get him into a right method, and more time is loſt in eradicating his improper habits, than it would take with proper care and attention, to make him a good penman. The right way of holding the pen, the poſition of the book or paper, and the proper poſture of the body, and the arms in particular, are too little attended to; whereas they are the moſt eſſential points.

Some maſters conſider it enough to ſet a boy a copy, give him a pen, and let him go on as faſt as he pleaſes, only recommending to him now and then to imitate his copy; but without making him write deliberately enough to do it correctly, or pointing out his errors in ſuch a manner as to enable him to amend them with exactneſs.

As in other branches, indifference and want of correctneſs once permitted to paſs with impunity in writing, is ſure to lay the foundation for much future trouble both to the maſter and the pupil, before he can be put into the right method.

There are many little requiſites, preparatory to the pupil's attempting to write with propriety and good effect, which muſt be carefully attended to; ſuch as the proper height and inclination, or ſlope of the deſk, the height of the chair or form he ſits upon, the ſize and cut

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of the pen, the exact ruling of the book, &c. which little circumſtances maſters are very apt to overlook, though they are of real importance when a boy commences writing.

In teaching ARITHMETIC, the firſt four rules are ſeldom well enough fixed in the mind of the pupil, before he is ſuffered to proceed to the others; thus the proverb of "the more haſte the leſs ſpeed" is verified. To ground the pupils in the firſt principles of any art or ſcience, is to render the ſubſequent parts of it more eaſy to be acquired; but I believe, in general, this premature kind of advancement in the ſeveral branches of education is more owing to the impatience and importunities of the fond parent, than to the wrong judgment of the maſter, or his wiſh to impoſe upon his pupil's friends, by giving them at leaſt *the appearance* of having made a great progreſs. It is, however, the greateſt and moſt ridiculous error a teacher can be guilty of: Does the builder rear the wall, or cover in the roof, before he has firmly laid the foundation of the houſe?

In teaching the CLASSICKS, one of the great errors that is committed, is the ſuffering the pupils to make too much uſe of a tranſlation, and not previouſly grounding them ſufficiently in the rudiments or firſt principles of the language; and what is of equal importance, the VOCABULARY: for without a thorough acquaintance

quaintance with the grammar, particularly the eight parts of ſpeech, and a good fund of words impreſſed on the memory from the vocabulary, it is in vain to proceed to tranſlate any author, nor indeed can it be attempted under theſe circumſtances, without the help of a verſion; which only renders the pupil idle and careleſs, and leaves the impreſſion but a very ſhort while behind it. Is it not natural for us in a long journey, to remember thoſe parts of the road, which were the moſt rugged and difficult to paſs; ſo it is with pupils, who in ſtudying the rugged and difficult parts of an author, are obliged to fag hard, as they call it, think a great deal, and have very frequent recourſe to their dictionaries.

I do not mean to ſay that tranſlations ſhould not be permitted at all; it is the indiſcriminate uſe of them that is objectionable, for I am of opinion that they ſhould only be put into the hands of boys, who are naturally very dull and ſlow of comprehenſion, to give them at leaſt ſome tolerable chance of being acquainted with the claſſicks, and that only in a ſuperficial way—*they* only muſt be ſuffered to uſe this kind of auxiliary.

In this, as in other branches of education, it is perfectly in vain to proceed to a ſecond or third ſtep, before the pupil is thoroughly acquainted with the firſt. I cannot repeat it too often, that to perfect him as he goes on, if he learns

learns ever ſo little at a time, is the only ſure way to make him a proficient by degrees, and ſave the maſter and himſelf a great deal of trouble and diſgrace.

It is unfortunate that teachers in general want that command of temper, coolneſs, and deliberation, as well as eaſe, and ſuavity of manners, that diſtinguiſhes many of the profeſſion; but the fact is, they want method and ſyſtem, more than they are naturally deficient in the above requiſites. If they would make a *conſcience* of doing their duty, judging for themſelves with reſpect to their pupils, without being influenced by the whims and caprices, or diverted from their objects, by the ill-founded complaints of parents, who are often no judges of the matter; and if they are, have in fact no right to dictate to a maſter, or interfere with his profeſſional buſineſs:—I ſay, if maſters would aſſume a proper independence of ſpirit, and ſhake off a little of the unneceſſary ſervility, and blind obedience they pay to unreaſonable parents, things would go on much better than they do in ſchools; and their pupils would be better taught, with half the trouble to themſelves; but the caſe is, the maſter is afraid of loſing the child as a pupil, if he pretends to have a will of his own, and differ in opinion from the parent. This ought not to be the caſe with a teacher, he ſhould

ſhould rather loſe half a dozen ſcholars, than give up his independence and authority, after the child is placed under his care.

Let parents take what time they will to ſelect a maſter; but when once they have fixed their choice, and entruſted him with the child, let them never pretend to interfere, except glaring miſconduct and miſmanagement, neglect or ignorance requires it; and let them be aſſured, that this will be the wiſeſt plan, and the moſt conducive to the welfare of their child: every remove a pupil makes from one ſchool to another, throws him back at leaſt half a year in his ſtudies. I write the more freely on theſe points, becauſe I have, from long experience, been fully convinced of the truth of what I ſay.

With reſpect to teaching the MODERN LANGUAGES, the ſame error in general is committed by maſters, that I have noticed in the other branches. The pupil, whether to flatter and pleaſe the parent, or give the maſter a tranſitory kind of credit, (which indeed it always proves in the end), is hurried on to talk and jabber the language, before he has acquired a ſufficient ſtock or fund of words from the vocabulary, or made himſelf enough maſter of the grammatical part, to do it with any proſpect of eventual correctneſs and preciſion. As I obſerved before, this-

this is like building a houſe, before the foundation is made ſtrong enough to ſupport the fabrick.

It is alſo too common a fault with maſters, to let the pupil read or talk away at random, without correcting him, and pointing out the particular errors he has made, and how ſuch and ſuch words ought to have been read or pronounced. Every trifling fault in either of theſe points, is at firſt of great importance as to future correctneſs; for good habits once acquired, are not eaſily eradicated; and to make it a matter of conſcience not to ſuffer a ſingle miſtake to paſs unnoticed, is to ſave the maſter an infinite deal of ſubſequent trouble, and the pupil himſelf much after-labour, diſappointment and diſgrace. I believe many young people who have been ſo unfortunate, as to fall into the hands of unconſcientious maſters, have had reaſon in after-life to reflect upon their injuſtice, with the bittereſt reproaches.

Would maſters but ground their pupils thoroughly in the firſt principles of every thing they teach, and not hurry them on too faſt, their progreſs, though at firſt ſlow and almoſt imperceptible, would, as they proceeded, appear to increaſe in a progreſſive motion, in proportion to their acquaintance with the ground-work; it is aſtoniſhing to me, that this method of forcing knowledge

knowledge ſo prematurely, is ſo much practiſed as it is.

The plan upon which MERCHANTS' ACCOMPTS or book-keeping is in general taught in ſchools, ſtands much in need of improvement; and the fact is, the practice of the art differs ſo much, in the various counting-houſes of merchants and tradeſmen, from what is learnt in ſchools, that it is almoſt impoſſible to lay down any certain ſyſtem or method to guide them by; however I have introduced in this work ſome obſervations upon the ſubject, with a new method of keeping the Journal, which I hope will be of conſiderable uſe to young people, both in ſchools and under private tuition in town. I have alſo endeavoured to ſet this branch of mercantile education in a clearer point of view to beginners; and I am perhaps the better enabled to do it, as I have been very lately in the actual daily practice of it, by keeping a ſet of books for a gentleman who is the author of a new ſyſtem of book-keeping, and to whoſe ſons I was alſo tutor at the ſame time. Moſt of the ſyſtems that I have yet ſeen uſed in ſchools, are too complex, and not clearly enough laid down for young boys.

The ſciences of GEOGRAPHY and ASTRONOMY, are very eſſential to the gentleman, the ſcholar, and the merchant; but too little attention is paid

paid by moſt maſters to thoſe two branches; however they have always appeared to me to be of ſuch importance to pupils in general, as well in a religious, as a ſcientific and mercantile point of view, that I conſider them as indiſpenſible, and wonder they are not more minutely and particularly attended to than they are. It is not enough to teach the pupil the mere *routine* practical part of them, ſuch as finding the latitude and longitude of a given place, or the riſing and ſetting of a particular ſtar; but his mind muſt be inſenſibly led upwards, and range the very univerſe in thought, for inſtruction and information, to enable him to form as juſt ideas as poſſible of that mighty whole, which the Moſt High has only ſet partially within our view.

It is both an amuſing, pleaſing, and moſt uſeful branch of education, not to mention the grandeur and ſublimity of the ideas it conveys to the human mind, leading the ſoul in a manner up to God himſelf. To crawl on the ſurface of the earth, without examining the nature of the place we inhabit, and conſidering the operation of *his* hands who formed and placed us in it, is to be but little ſuperior to the brutes, that ſtalk around us with unconſcious gaze.

To have conſtantly before our eyes, the ſplendid luminaries of heaven, and the vaſt ex-

panſe of the univerſe, in which they either ſteadily remain fixed, or rapidly move in their career, to anſwer the ſeveral purpoſes for which the creator intended them: to ſee them, I ſay, and not to admire, wonder, and wiſh to be better informed reſpecting them, is to be as ſenſeleſs and ſtupid as the beaſts that periſh.

To impart their knowledge of theſe branches with proper effect, teachers ought themſelves to feel the grandeur and ſublimity of the ſubject, taking the plaineſt, ſimpleſt, and moſt attractive means they can, to convey their ideas to their pupils. In general, however, they think it ſufficient to make the pupils learn the diviſions of the earth, and read over the deſcription of the globe, without entering minutely enough into the ſubject, and fully explaining the whole of the ſyſtem, as it is connected with aſtronomy.

In teaching HISTORY, the maſter generally ſatisfies himſelf, with making his pupils read over a certain quantity of hiſtorical matter, ſometimes of one, and ſometimes of another deſcription of it; one day in this book, and another day in that, without making a regular ſeries, or a methodical plan his object. A pupil who one day reads a portion of the Roman hiſtory, another day of the Engliſh, and a third day jumps to the hiſtory of Greece or Turkey, has his ideas all jumbled together and confuſed, inſtead

inſtead of having them properly aſſociated and diſtinctly claſſed.

The ſtudy of hiſtory is not difficult or unpleaſant, it only requires method and ſyſtem in the teacher: What can be more abſurd, than to inſtruct a ſcholar in the hiſtory of a foreign country, before he has been made pretty well acquainted with his own? and yet it is often done.

The mode of teaching the MATHEMATICS cannot admit of much variety, and conſequently is not ſo much liable to error in teaching as ſome of the other branches. I have, however, under its proper head, made ſome obſervations upon that neceſſary part of education; only remarking in this place, that the pupils are generally hurried too faſt through the *elementary* parts, and are frequently ſtudying the fourth and fifth books of Euclid, before they can deſcribe a ſquare or a triangle.—They ſhould firſt learn the definitions and axioms very correctly, and be able to deſcribe on a ſlate, every figure that does not require the nicety of the compaſs, before they proceed a ſtep further.

SECT. II.

General Rules.

THE general object of EDUCATION is evidently to qualify men to appear to advantage in future life, which can only be done by communicating to them ſuch *knowledge*, and leading them to form ſuch *habits*, as will be moſt uſeful to them hereafter; and in this *the whole of their future being*, to which their education can be ſuppoſed to bear any relation, is to be conſidered.

In TEACHING or COMMUNICATING INSTRUCTION well, the chief art lays: 1. In having a proper regard to time and place; 2. In attracting and commanding the entire attention, as well as enforcing the ſtricteſt obedience and ſubordination; 3. In adapting the nature of the inſtruction to the age and capacity of the pupil; 4. In conducting the buſineſs with good temper, deliberate coolneſs and kindneſs of expreſſion; "*ſuaviter in modo, ſed fortiter in re*—i. e. *gentle in the manner, but firm to the purpoſe itſelf:*" 5. In never ſuffering the pupil to attend to more than one object at a time.

Early hours before meals, and not too ſoon after them, in quiet and retired ſituations, are the moſt deſireable for the purpoſe; and

plain,

plain, eaſy, ſimple language the fitteſt to be employed. All violence, anger, and paſſion muſt be laid totally aſide, and whatever little inattentions or errors the pupil may be guilty of, the temper muſt never be ruffled, even in appearance; for children have ſenſe enough to ſee when the teacher is put out of humour, and viciouſneſs enough to take the advantage of it, by repeating the fault to vex him more if they can, when they perceive that it has any effect upon him; therefore never let yourſelf down ſo much in their eyes, as to be put out of temper; for it is natural to moſt children to wiſh to take liberties with their inſtructors, and, if poſſible, to get the better of them.

It is very proper, however, to conſider, that they are but children, and upon no account to loſe your temper, whatever their provocation may be; puniſh them if you will, but never let them ſee that they have it in their power to diſturb your evenneſs of temper; and, above all, never ſtrike them haſtily: by this means, you will acquire an aſcendancy over them by degrees, that they will not be able to ſhake off, eſpecially if you ſeem to puniſh them with regret.

It is unneceſſary to obſerve, that the moſt unfit times for conveying inſtruction to the mind, is when the ſtomach is full, or the body fatigued with exerciſe; for, in the former caſe, the bodily organs are clogged and leſs active,

and the mind becomes proportionably clouded and dull; in the latter, the whole frame being relaxed and wearied, the impreſſions made upon the mind are but weak, and the ideas retained very confuſed.

Whatever you ſay or do, let it fall from you gently and deliberately, giving the pupil time to receive and digeſt it in his mind, before you confuſe him, by proceeding too haſtily to another point; encourage the ſlow, and timid; awe the daring and forward pupil.

Never paſs over the moſt trifling fault or error, in whatever branch you are teaching, without pointing it out, and making your ſcholar correct it; for bad habits of incorrectneſs, always acquired from that omiſſion of the teacher's, will require treble the time to cure, that it would take to teach him a good habit. I earneſtly intreat parents and teachers of every deſcription to weigh this well, and act accordingly. Make a conſcience of it, and you will be ſure to ſave yourſelves, and maſters who may happen to come after you, an immenſe trouble.

There is not a more tedious taſk attached to the buſineſs of teaching, than to have to encounter a pupil who has been ſuffered to get into the incorrect habits I have been ſpeaking of. It is a duty all teachers owe to one another, to be ſo particular and exact with their pupils, that when they happen to be removed and put

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under the care of another maſter, he may have nothing more to do, than to continue them where the laſt left off, inſtead of having to begin them over again afreſh; and thus throw them a year back perhaps in their time and ſtudies, and exhauſt his own patience with them too.

Never ſuffer a pupil to go a ſtep further, till the firſt is fully underſtood; and if he ſhould learn one-tenth part the leſs, let that portion be thoroughly and correctly learnt: in the end, he will be juſt as forward, as if he had ſuperficially and more rapidly gone over it in one-half the time.

It is not the quantity at firſt, but the quality of the inſtruction, and the correctneſs with which it is impreſſed upon the mind, that eventually benefits the pupil. In acting upon this plan, his progreſs will indeed appear very ſlow for ſome time, nay almoſt imperceptible; but as it quickens its pace, gradual but ſure, that pace will, by degrees, increaſe to ſwiftneſs and rapidity, and at the ſame time equally ſure; juſt as we act, in performing an extraordinary journey on horſeback; we ſet out ſlow at firſt, and gradually encreaſe our pace, till the animal's blood is properly warmed, and his joints made ſupple; we then proceed quicker and quicker to the ſwifteſt pace, and he is the better prepared for it, by his at firſt gradual progreſs.

Never weary out your pupil's attention with too much ſtudy at one time, or with too much of any one thing; change or ſhift the ſubject, as you find it pleaſing to him or yourſelf: by dividing the attention too much, you will diſtract, confuſe, and retard him.

In ſchools, however, that cannot, and ought not to be done; regular time, method and ſyſtem, are there the very life of the buſineſs, and the ground-work of improvement; but of that in its proper place—what may be right under one circumſtance, is wrong under another; and that is the caſe in this point, as I have very frequently obſerved.

Repeat often and go over again, what you wiſh the pupil to learn; you muſt uſe line upon line, and precept upon precept; and even when capable, never burden your pupils minds with more than two or three branches of education at a time; more will confuſe them, and they *muſt* neglect one of them; introduce the fourth to their attention, by ſlow and gentle degrees, as a matter of indulgence and amuſement; make it ſeem a favor done them—indeed, in every thing you lead their minds to, teach them to look upon it as a kindneſs, or a wiſh in you to give them pleaſure, rather than as a taſk or a duty they muſt perform; at the ſame time it may be very ſeaſonably hinted to them, that in order to make them good, clever, and ſhining men, they muſt learn ſuch and ſuch things;

things; that without them they cannot live with comfort, or procure the means of ſupport and convenience; and it is alſo proper to point out inſtances and examples to them, among their acquaintances, neighbours, or friends, where, by learning, and attention to their ſtudies when young, they have arrived at riches, honours, and a good name. Examples alſo of the contrary, proceeding from ignorance and neglect of their ſtudies, ſhould be pointed out to them; for be aſſured that with the young, *example* is far more effectual than *precept*.

But while I am talking of making learning an amuſement and a pleaſure to young people, I know very well from woeful experience, that there are ſome children of ſuch dull, wayward diſpoſitions, croſs-grained and ſtubborn tempers, that you can make them like nothing but play, and their own objects of amuſement; juſt whatever they happen to fancy themſelves: With ſuch pupils what can the teacher do? he muſt diligently and conſcientiouſly endeavour to divert their wrong notions into the right channel; and if he does not ſucceed by gentle means, they muſt be driven into it by the fear of puniſhment, or left to take their chance: a maſter cannot do impoſſibilities, nor ſhould parents or friends expect it.

But in puniſhing, and even reproving, a teacher muſt conſider the diſpoſition of the pupil:

pil: a word to one is enough, while the ſevereſt reproaches will have no effect upon another; one child is of a meek, tender, pliant diſpoſition, while another is ſtubborn, hardened, and vicious: one child will anxiouſly ſhrink from public reproof, ſhame, and diſgrace, while a ſecond will boldly meet, and make a joke of it; ſome are ſerious and grave, while others are ſprightly and gay.

To diſcover the various bents of inclination and diſpoſition, to diſcover the moſt effectual means of touching the pride, and exciting the emulation of children, is a very important branch of the teacher's duty: to know when to awe, and when to ſoothe the aſpiring youth; to proportion the cenſure, puniſhment, or diſgrace, to the feelings of his pupils, and obſerve the moſt ſeaſonable times to reward, encourage, and excite their exertions, is the province of the maſter, who wiſhes to gain the full aſcendancy over his pupils.

When children commit trivial and venial faults, it is ſufficient to expreſs your diſapprobation of them in terms of wonder, ſurpriſe or aſtoniſhment, that they ſhould do ſo: tell them it is unprecedented, bad, wicked, *monſtrous*, *ſhocking*, and ſo forth; and that you expect never to find it repeated; but puniſh only great faults, and even delay that as long as poſſible; make it your laſt reſort.

It

It is better gently to pour the ſoft inſtruction o'er the mind, than to uſe compulſive means; and rather let your pupil be idle for a time, than perform his taſk badly; if he is not in a humour for ſtudy, either let him play, or try ſomething elſe more agreeable to the humour he is in; for neither children nor grown people are always in the right diſpoſition of mind for one particular ſtudy, nor indeed ſometimes for any at all; and it is then much better left alone altogether.

It has often been matter of much wonder to me, that in learning Latin and Greek, flogging, cenſure, and diſgrace, ſhould be more requiſite than in learning French, Italian, drawing, writing, and arithmetic; but ſo it is, and I can only account for it, by ſuppoſing, that, from habit and cuſtom, maſters have leſs pleaſure in teaching Latin, from the exertion it requires on their part; and conſequently leſs patience and temper in doing it; by which means the pupils are early diſguſted, and become ſo confuſed and perplexed, from the dread of anger and puniſhment, that as they proceed, ſo far from finding any pleaſure in it, they naturally conceive an averſion and diſguſt: for really I ſee nothing more crabbed or difficult in that or the Greek language than in others, and perhaps leſs, becauſe there is more certainty of

of method and rule to go by. However, it is a matter of ſome conſolation to perceive, that even in public ſchools, the diſgraceful practice of flogging is going very faſt out of uſe; in boarding-ſchools it is almoſt totally exploded.

The beſt mode of communicating inſtruction that I have obſerved, is the SOCRATIC method, which teaches the pupil by convincing him of truths he is a ſtranger to, from principles he is acquainted with, by propoſing ſuch plain queſtions to him, as that he ſhall be able to anſwer them himſelf; and in ſuch order, that one queſtion ſhall introduce and give light to another, and lead him to the point you aim at.

To convince the pupil, for inſtance, of the abſurdity of that ſyſtem which ſuppoſes the motion of the heavens round our earth, he might be aſked what he would think of the perſon who in order to roaſt a piece of meat, ſhould make the fire, grate, and chimney wheel round *it*, inſtead of turning it about by the ſimple motion of the ſpit? His own anſwer would not only convince him and make a deep impreſſion, but lead his mind on to apply the ſame argument to other apparently contradictory operations.

If it were wiſhed to convince him of the being of the Deity, the teacher might ſhew him a watch-

a watch-maker fitting up a watch, a ſtatuary carving a ſtatue, or a maſon building a houſe; then aſk him whether the parts of a watch, ſtatue, or houſe, could have come together of themſelves, or wrought themſelves into their preſent form, without the help of any artiſt? Accuſtom your pupils to think, and uſe their faculties of ſight and touch, which leads the mind to conviction. In argument a teacher ſhould not be ſatisfied without demonſtration.

It is very proper to reaſon children out of their faults and errors; they underſtand reaſoning as ſoon as they can talk, and even like to be treated like rational creatures ſooner than can be conceived: this is a pride that ſhould be cheriſhed in them, and, as much as poſſible, made the inſtrument of touching their minds, and regulating their conduct: it is ſurely better to reaſon them into what is right, than flog them into it, and with moſt children it may be done.

Be *conſcientious* in the diſcharge of your duty, for pupils of both ſexes have always ſenſe enough to diſtinguiſh, and to deſpiſe the teacher who neglects it; the contrary enſures their reſpect and eſteem, as well as their obedience. Children are in general pleaſed to tell of the little faults and failings of their tutors, but the teacher ſhould never let himſelf down in their eyes, or put it

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in their power to repeat any thing to his diſadvantage.

It was a good precept of one of the ancient writers, "*reverence thyſelf;*" but it is a ſtill better one of him who ſaid, "*the* GREATEST REVERENCE *is due to children:*"—nothing but modeſty and decorum in every action, innocence and propriety in converſation and conduct, ſhould be uſed before them; even the appearance of the contrary ſhould be avoided; for not a word or action of the parent or teacher eſcapes the natural curioſity of youth. In every thing let the teacher ſtedfaſtly remember, that "not a word, not even a ſound reaches the infant ear in vain;" and that every example ſet is followed by them with avidity.

With reſpect to puniſhing pupils, ſo cloſely allied as it is with teaching, it is an idea of many, that a parent or tutor ſhould not correct a child till he is perfectly cool; and that to chaſtiſe with anger defeats the end of it: it appears to me, however, that this is not a right maxim, and that it may be carried too far. Children ſeldom do wrong, without being very ſenſible of it, and conſcious, upon reflection, that they deſerve puniſhment: they have alſo ſenſe enough to form a general notion of the degree of their culpability, and conſequently of the degree of provocation, it muſt give their maſter or parent; and their diſpoſition to tranſgreſs for the future

is

is beſt prevented by not diſappointing them in their expectations; *i. e.* by their being actually cenſured or puniſhed with that degree of diſpleaſure, and the effects of it, which they are *conſcious* they deſerve.

But they will equally deſpiſe their tutor or parent, if the diſpleaſure which he expreſſes, be either too little, or too great for the occaſion; in fact, they judge of him by themſelves, and they have no notion either of being offended without being angry, or of being angry, without correcting for the offence upon the ſpot, and before their anger be ſubſided.

Theſe general rules and obſervations being laid down, I ſhall now proceed to apply *them*, and the remarks that I have before made, to the ſeveral caſes I propoſed, beginning with boarding-ſchools.

CHAPTER

CHAPTER II.

SECT. I.

The Art of Teaching applied to Boarding-Schools.

WITHOUT adverting to thoſe duties of a maſter, which regard the bodily health and perſonal accompliſhments of his pupils, I ſhall confine myſelf to the examination of his duty, as far as it reſpects the cultivation and improvement of their minds, by practiſing himſelf, and ſeeing that his aſſiſtants practice, a *proper* and *conſcientious* method of teaching or communicating inſtruction to the pupils.

His firſt duty is in the proper choice of his ASSISTANTS, who ſhould be men of undeniable good character, abilities, and temper: mere hacknied, half-educated teachers, are procured at little or no expence but their board, and barely enough to dreſs themſelves decently: whereas a liberal ſalary, and genteel friendly treatment to a properly qualified aſſiſtant, is always the cheapeſt and the moſt advantageous in the end; but in this reſpect moſt maſters act a very impolitic part, and, according to the vulgar proverb, "*are penny wiſe and pound fooliſh.*" A well accompliſhed genteel

genteel aſſiſtant, gives a degree of credit to a ſchool, beyond what the principals of academies in general imagine.

Having carefully ſelected the aſſiſtant, it is the maſter's next duty to introduce him reſpectably to his pupils; giving them very ſeriouſly to underſtand, that they are to reſpect and obey him the ſame as himſelf, and that any deviation from that reſpect and obedience, will be immediately puniſhed; and he ought to keep his word with them—one or two examples made, will ſoon eſtabliſh the aſſiſtant's authority, and it then becomes his own fault, if he loſes it—the maſter has done *his* part.

I would always recommend however to teachers, to build their authority on their own good and reſpectable conduct, and not depend upon their principals; without proper ſubordination, teaching cannot be advantageouſly conducted, but muſt be a jumble and confuſion, and the ſchool when the maſter is abſent, a ſcene of uproar and diſorder; without exact method, regularity, and compleat ſubordination, no good can be done in ſchools.

Theſe preliminary points being arranged, and ſubordination enforced, in proceeding to teach, the aſſiſtant muſt as much as poſſible lay aſide all other thoughts and cares, devote his whole mind and attention to the object before him: and in the firſt place endeavour to attract and

command the attention of his pupils; keeping it up and enforcing it, when gained, by every means in his power; pauſing, when he perceives it flagging or diverted to other objects; expoſtulating calmly with them on their want of it, and expreſſing his determination to ſtop ſhort and not proceed, till they have reſumed it; at the ſame time intimating his wonder and aſtoniſhment that they could be ſo indifferent to a buſineſs, that concerns them ſo much more than him; viz. their welfare in life, their characters as ſcholars, and their happineſs as rational beings.

If repeated breaches of attention require repeated expoſtulations, and where kindneſs will not anſwer, puniſhment or diſgrace of ſome kind muſt follow. I have found it very effectual to take the book from the offender, make him ſtand out of the claſs in the middle of the floor, and keep him there for an hour, and after the ſchool buſineſs has been over, oblige him to ſit down to the leſſon he ſo neglected: corporal puniſhment is only to be reſorted to after frequent commiſſions of the ſame fault, and the caſe being reported by the aſſiſtant to the maſter, the latter ſhould inflict the puniſhment in whatever meaſure he conceives right; but I would ſtrongly recommend all expoſure of the body to be laid aſide, and the uſe of a ſlight cane applied upon the back ſubſtituted inſtead

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of it. Before, however, I tried the effect of corporal puniſhment, I would make a practice of giving the offender a taſk to learn by heart, proportioning the length of it to the fault committed; but by no means ever to ſuffer it to paſs unſaid, or the offender permitted to play till it was learnt, but confined to the ſchool or his own room.

If you give taſks, and let them remain unſaid, you deſtroy all the effect, for, when once the pupil knows that you never paſs a taſk over, he will take care to ſubject himſelf to as few as poſſible.

With reſpect to corporal puniſhment, it is a miſtaken notion in parents and maſters, that aſſiſtants ſhould never be empowered to puniſh; for the very circumſtance of their being authoriſed, would prevent the neceſſity of it. Children know very well when the teacher is not permitted to uſe the cane, and they take advantage of it accordingly.

In the ſeveral academies that I have ever taught in and ſeen conducted with good order, the teachers were always authoriſed to uſe the cane, and the pupils were publickly made acquainted by the maſter, that he had given ſuch authority for the purpoſe of preſerving ſubordination and regularity. I never yet ſaw that practice do any injury to maſters or pupils, but much, very much the reverſe. Aſſiſtants have

in general as much tenderneſs and good nature as their principals, and I do not believe that one in twenty, would make an improper uſe of the power entruſted to his diſcretion.

There is nothing of ſo much importance to a teacher as firmneſs; but he muſt at the ſame time be conſiſtent, patient, and even-tempered.

In teaching a ſingle pupil, the trouble is not very great, and attention is eaſily kept up; but in teaching by claſſes, there the difficulty lays: there are rules however to be obſerved, which will tend greatly to facilitate that mode of inſtruction.

The moſt perfect ſilence and attention being obtained, and your pupils ranged according to ſeniority or abilities, you ſhould obſerve to them when you have occaſion to ſpeak on the ſubject of the leſſon, that what you ſay to one, you ſay to all; and it is not amiſs when you perceive any one inattentive, to aſk him what you have juſt been ſaying; if he cannot tell you, ſtop ſhort and point out a taſk for him to learn after ſchool is over, or if he repeats his fault, take his book from him, and turn him out of the claſs for that time; he will take better care and be more attentive the next time his claſs comes up.

If you are interrupted by any talking among thoſe of your own claſs, or the boys who may be ſitting near them, always ſtop ſhort at once till ſilence is obtained, obſerving with a proper appearance

pearance of diſapprobation, that you cannot teach and attend to *their* converſation too; never ſuffer or accuſtom pupils to converſe together, or interrupt you while you are engaged in teaching; break them of that bad habit without loſs of time; it is eaſily effected, and ſo may all other improper habits in youth, by a little trouble at firſt.

In large claſſes it is impoſſible for the teacher to make all the pupils go over the whole leſſon, but in that caſe, he ſhould divide it among as many as poſſible, making three or four lines or ſentences do for each, and then begin again, till the leſſon has been gone through three or four times, (I allude here to Latin, Greek, French, or any of the other languages, except Engliſh,) during the whole leſſon, taking care to command and keep up the attention of all, and calling upon any one whom he perceives trifling or inattentive, to begin immediately where the laſt reader was ſtopped on his account; and if he begins at a wrong place, give him a taſk directly, or ſend him out of the circle with diſgrace.

The teacher ſhould always contrive to have his pupils form a ſemi-circle before him, and if poſſible, ſeated; for that reaſon I ſhould prefer ſemicircular ſeats or benches; but if the forms or benches are ſtrait, I would place them as

three ſides of a ſquare, and ſit in the open ſide myſelf; thus having the whole claſs in view, and under my eye at one glance.

I have ſaid thus much about commanding the attention, becauſe it is a mere mechanical habit, that every child may certainly, though inſenſibly, be brought into, by ſtrictly enforcing and accuſtoming them to it. The weak tender organs and fibres of their bodies, are naturally unſteady and reſtleſs when under reſtraint, and conſequently the mind is ſo; but as they increaſe in growth and ſtrength, that by degrees wears off, and they can with ſteady attention devote their thoughts to whatever they engage in.

It is the teacher's duty to give them this habit early, but not to fatigue the attention too much at any one time: two or three hours at a ſitting is quite enough for children. In ſome academies they uſe them to four or five hours before dinner, conceiving that they are fitteſt for ſtudy during thoſe hours; but with deference to maſters, I think it too much, and that it over-fatigues the attention: ſix hours a-day, fully employed, and ſo divided as not to keep them too long at one time, are quite enough for young people: one hour before breakfaſt, three after, and two more after dinner, will divide the time, I think, very properly. As they

they increaſe in years, more time may be devoted to ſtudy, juſt as their own inclination and conſtitution may dictate as right.

Kindneſs and politeneſs of expreſſion, coolneſs and calmneſs of temper, openneſs and ſincerity of diſpoſition, with earneſtneſs and ardour in the diſcharge of his duty, accompanied with gentleneſs, and a conſcientious deſire for his pupil's improvement, are the true characteriſtics of a good teacher. He ought as much as poſſible to be religious and ſerious, but not too grave; knowing when to relax, and trifle agreeably with his pupils, without decreaſing his authority, and when to check the riſing familiarity; he ſhould treat his pupils with affection and kindneſs, but never ſuffer them to take an undue liberty: there is a certain diſtance at which every child muſt be kept, and that diſtance the teacher muſt judge of for himſelf, according to the diſpoſition of the pupil to preſumption or forwardneſs.

With a good addreſs, there is a way of gaining a complete aſcendancy over young people, by always appearing eaſy and aſſured at firſt coming among them; ſeem to be quite familiar to them and your buſineſs, and without being ſtiff, put on a degree of proper conſequence and diſtance, and even confidence: let them feel that you know your buſineſs, and are determined to be maſter;—if you ſeem at a loſs,

ſtrange, and aukward at firſt, you will oppoſe a laſting bar to your authority. A full aſcendancy is only, however, to be acquired by degrees, and in proceſs of time, by tempering puniſhment with much good-nature, and a backwardneſs to exerciſe it; being at the ſame time conſcientious in the diſcharge of your duty, and expreſſing an earneſt deſire for their improvement.

Upon his firſt entrance into a ſchool, a teacher ſhould not be too haſty to puniſh, or be ſtrict, till he has ſtudied the ground, the general plan of the ſchool, and the diſpoſitions of the pupils; for boys always reſiſt any innovation by a ſtranger, of what was cuſtomary with a former teacher, and if the new one takes more upon him, or puniſhes more, he will excite them to mutiny, and injure his authority; but if he goes on gently, and waits till the novelty of his appearance is paſſed, he may do any thing with them; and inſtead of beating them often, he ſhould get the maſter to ſtate publicly to them that he gives the teacher full authority to uſe the cane, or otherwiſe puniſh, the ſame as himſelf; and that he will conſider it an inſult to himſelf to diſobey the teacher's orders.

When you have any thing particular to impreſs upon a whole claſs, firſt call them to attention, ſuffer not a word to be ſpoken, or the leaſt levity to be ſhewn; addreſs yourſelf to

to all generally with a manly freedom and confidence, explain what you wiſh to ſay to them in few words, (for boys do not like long ſpeeches,) but audibly and deliberately. If noiſe begins, ſtop ſhort immediately, and obſerve that you cannot proceed till perfect ſilence is obtained.

In the uproar and confuſion of a badly managed ſchool, by beginning upon this plan, and keeping invariably to it, I have in the courſe of a few weeks acquired the moſt complete aſcendancy over the pupils. I made it a point never to proceed in the buſineſs, while there was the leaſt noiſe or inattention.

I have often had occaſion to obſerve to my pupils when trifling, that two things cannot be well done at one time; attend to what we are now doing to oblige *me* and benefit *yourſelves*, and when we have done, I will play with you myſelf; and I have kept my word with them, much to their ſatisfaction, and without injuring my own authority.

I have alſo frequently found it anſwer a good purpoſe, to tell them that I ſhould not wiſh to be obliged to treat them like ſlaves, by beating, and keeping them in awe through fear, but as gentlemen, and ſenſible boys.

By talking to them, and acting in this way, you ſhew that you are not moroſe; but that you will have them do what is right and expected of them;

them. By uſing good-natured language you do away the idea of compulſion, and enſure their attention and reſpect; for boys have always ſenſe enough to diſtinguiſh the teacher who is entitled to reſpect from him who does not deſerve it, and they will behave accordingly.

Among children the rule of PRINCIPIIS OBSTA is a very proper one, and you ſhould always begin with them as you would end; check every thing improper at firſt, and they will not attempt to take liberties afterwards.

The teacher ſhould avoid as much as poſſible, making any thing that he wiſhes the pupil to learn a burden or a taſk to him: whatever is ſo impoſed, immediately diſguſts him, and the mind conceives an averſion to it, though before it was a matter of pleaſure or indifference: if you even order him to play at any particular thing ſo many hours in the day, if he has not a reliſh for it, he will ſoon be tired of it; and for that reaſon you ſhould avoid as much as poſſible, making him ſtudy any particular leſſon, except he is in a proper diſpoſition and ſtate of mind for it: a boy will learn three times more when properly diſpoſed for it, than he would at another time: and therefore thoſe ſeaſons of aptitude and inclination ſhould be laid hold of; though in academies it cannot always be attended to; and indeed the preceding obſervation is principally applicable to very young pupils; for once

once arrived at a certain age, and placed in a public ſeminary, they muſt not be humoured, but *compelled* to be regular and methodical in their ſtudies, if they have not ſenſe or taſte enough for learning to do it voluntarily: but certainly a ſpontaneous application to ſtudy, is far more likely to be crowned with ſucceſs, than that which is commanded and enforced as a duty.

If the head of an academy wiſhes his aſſiſtant to be thoroughly uſeful to him, he ſhould never addreſs him in the language of ſuperiority, or reprove him in the ſlighteſt degree before his pupils: one public reproof will immediately deſtroy his conſequence and authority. The boys ſhould never be permitted to ſuppoſe that there is any want of harmony between him and his principal, or that he could deſerve cenſure: if a teacher really does draw it upon himſelf, he is unfit to be retained, and ought to be diſcharged, if his conduct is not immediately altered; but never let the pupils know why you part with him. I muſt, however, obſerve, that nothing tends ſo much to keep pupils backward, and give real trouble to the maſter, as the frequently changing his aſſiſtant. In reply to this it may be urged, that teachers in general are an unſettled and unſteady claſs of people; I grant it: But what makes them ſo? Why, the bad en-

encourage-

couragement they have from maſters; but I can ſtate it as a fact, that there are a *few* (and but a *few*) academies in London and its neighbourhood, where the aſſiſtants have continued for years: I know one at this moment, where the three aſſiſtants have been upwards of *ſeven* years; becauſe their principal makes it worth their while, treats them as his friends, and not as underlings beneath his attention; of courſe they make his intereſt their own.

It has been obſerved to me lately, by one of the moſt reſpectable heads of an academy in this country, that the reaſon in general why maſters keep their aſſiſtants ſo much under, and treat them ſo cavalierly as they generally do, is becauſe they are afraid of their ſupplanting them: to which I replied, that if the maſter was a liberal minded man, treated his aſſiſtants like gentlemen, gave them a ſufficient ſalary, and other caſual encouragement, there was not one in twenty that would even harbour ſuch a baſe thought, much leſs dwell upon it: it is when they meet with ſupercilious ignorance, illiberality, and contemptuous treatment in the principal, that they will naturally endeavour to take care of themſelves, and make all the friends they can; and if their able good conduct attracts the notice of their employer's connection, who is to blame?

I was

I was informed ſome time ago, that a maſter of an academy, in the neighbourhood of London, diſcharged a teacher, (for what reaſons I do not at this moment recollect,) who was in a few days afterwards ſent for by an eminent merchant, the father of two young gentlemen who were at the academy, from whence (as it is underſtood,) he was unjuſtly diſmiſſed: the gentleman aſked him the reaſon of his having been ſent away, which having ſatisfactorily explained, he was informed, that he might draw upon him for one thouſand pounds, to open an academy for *himſelf*, and that his two ſons ſhould be his firſt ſcholars:—it was accordingly done; and Mr. S. has at this moment a very flouriſhing ſeminary. This I mention as matter of fact, and I leave the comment to my readers.

It has been remarked by GOLDSMITH, in one of his eſſays, that he has known a butcher, and even a barber, who had failed in their own buſineſs, ſet up an academy, and make a fortune; and the fact I am going to relate, which lately occurred to myſelf, is a corroborating proof of the juſtice of his obſervation, that follows the above remark.

In looking at a houſe, which a gentleman belonging to a public office in the city had to let, for a friend, he informed me that it had been taken by his acquaintance, who had ſaved a little money in his trade as a baker, for an academy.

demy. I aſked him with ſurpriſe how the buſineſs was to be conducted;—Oh! anſwered the gentleman, my friend told me he propoſed to employ one or two gentlemen of abilities, as aſſiſtants, to teach the pupils; and *he* was to SUPERINTEND the buſineſs only.

"Can we wonder," ſays GOLDSMITH, "that many of our youth are ſo ignorant and badly taught, when ſuch maſters are entruſted with their education?" and I may add, can any one be ſurpriſed if this BAKER employed ignorant teachers, or that if he happened to be clever, his chief aſſiſtant ſhould ſupplant him, upon receiving the leaſt unhandſome treatment.

I believe I do not go too far, when I aſſert that a perſon can never make a thorough good teacher, who has not been regularly bred to the buſineſs, and from the age of fifteen or ſixteen ſerved a kind of noviciate or apprenticeſhip to it, and had a great deal of ſubſequent practice beſides. A man may be a very good ſcholar himſelf, and yet have a very indifferent idea of making others ſuch. A gentleman may iſſue from OXFORD or CAMBRIDGE heavy laden with claſſic lore, and yet make a very poor figure in an academy, as a TEACHER of the claſſics; but when to knowledge, the teacher unites experience in his profeſſion, he then becomes an uſeful aſſiſtant.

There

There is certainly a greater difficulty in teaching in boarding-ſchools, than in almoſt any other ſituation in which a tutor can be placed; for if once he loſes his authority, and inſubordination prevails among his pupils, it is impoſſible to teach with effect.

Maſters ſhould never oblige their aſſiſtants to attend the pupils in their play hours, or to be more with them than is really neceſſary after ſchool is over; for that leads to too much familiarity and want of reſpect, and more than can be well imagined. I do not mean to ſay that the aſſiſtant ſhould be exempted altogether from watching over them in their hours of play; but it ſhould be from his apartment, or from the ſchool room only. Some maſters are not ſatisfied, except the teacher is parading about the play ground all day among them, which is a uſeleſs and unneceſſary confinement, giving him rather the appearance of a boy-keeper, than a teacher of young gentlemen. I actually knew one maſter that would not even let his aſſiſtants *read* in the play-ground.

A claſſical teacher ſome time ago obſerved to me, that maſters now did not care ſo much about an aſſiſtant's being clever or a man of abilities, if he was but pliant, and would ſubmit to confine himſelf with the pupils. If the childrens' health, their play, and the humouring their caprices, are the principal ends of their parents ſending

ſending them to ſchools, the maſters' ideas are right enough, and of courſe the evil originates with the parents: for my own part, much as I have ſeen of the academical life, I could never yet perceive any great advantage in the teachers' attending the boys in their play hours; but I have ſeen a great deal of evil reſult from it with reſpect to their obedience, attention, and ſubordination. I have obſerved that in ſchools where the aſſiſtants had nothing of this ſlaviſh duty, the boys were always the beſt behaved and under the beſt command: the worſt effect that I have ever ſeen ariſe from the pupils being left to themſelves, even *on a wide common*, has been a bloody noſe, or a black eye, perhaps, and now and then going a few yards out of their bounds to buy gingerbread, or look for a bird's neſt. Boys left to themſelves will never do ſo much miſchief, as thoſe who being under conſtant reſtraint, watch their opportunity and break looſe: long experience has convinced me of this.

What harm can parents ſuppoſe will ariſe to children at ſchool, by being left to play and battle out their diſputes among themſelves; in my own opinion none at all, and I never yet ſaw any: the bigger boys in general never ſuffer the little ones to be oppreſſed, and at *Eton*, *Harrow*, and other *public* ſchools, the boys are more manly, ſpirited, and ſenſible, than thoſe who are coddled up in a boarding-ſchool: they always know

know more of the world, and turn out the moſt ſhining men.

In boarding-ſchools the attending the pupils at their breakfaſt and ſupper hours, (the principal generally preſides at dinner himſelf) ſitting with them confined in the ſchool the whole of the winter evenings, and afterwards attending them to their bed-chambers, forms the moſt diſagreeable and ſlaviſh part of the duties of an aſſiſtant; for ſometimes the confuſion, uproar, and inſubordination is ſo great, that he can hardly ſit with patience or preſerve any decorum at all. In that caſe, nothing but *prompt* and *immediate* puniſhment of the principal offender will do, and the maſter ought always to ſupport the teacher in it, otherwiſe it would be impoſſible for him to be abſent, without finding a ſcene of confuſion and diſorder the conſequence.

After ſhewing them that you have ſpirit and reſolution enough to puniſh, I have found it anſwer a very good purpoſe to reaſon and talk them into ſilence and good order, arguing with them as if they were men, and expoſtulating with them in terms of kindneſs and good nature; at the ſame time perſiſting in your reſolution of puniſhing by confinement, a long taſk, and even a good caning, thoſe who will not liſten to reaſon, or be led by kindneſs and a ſenſe of decorum.

It is uſual to paſs a mark round at breakfaſt and ſupper; but I ſhould prefer making the *ſenior* boys in turn ſtand at the head of the table, and *viva voce* read ſome uſeful and entertaining paſſages in hiſtory, geography, &c. to attract the attention and gain ſilence, as well as improve the mind.

I have mentioned theſe general circumſtances the more particularly, becauſe in boarding-ſchools, teaching is ſo much aſſiſted by ſubordination, and the authority of the aſſiſtant over the pupils, that without them he can do nothing at all, and might juſt as well throw up his employment. Teachers will never be able to remain in academies, with comfort to themſelves or advantage to their employers, till more reſpect is paid to them, and boys kept more decidedly under; for there all the evil lies. Parents ſhould early inculcate upon their children the higheſt reſpect for their inſtructors, and always ſhew them marked reſpect themſelves.

If maſters were more aware of the extreme importance of theſe points, they would more effectually ſupport their aſſiſtants' authority, and the conſequences would be highly beneficial to themſelves.

I recommend to parents and my readers in general, the peruſal of Dr. Goldſmith's Eſſay on Education, where the relative ſituation of maſ-

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ters, uſhers and pupils, is very ably and properly noticed.

Of country boarding-ſchools it is at this moment notorious, that it is with the utmoſt difficulty the conductors of them can procure aſſiſtants at all; for young men now prefer entering into the army or navy, or doing any thing rather than be ſubjected to the whim, caprice, and ſupercilious treatment of ſelfiſh and conceited maſters. This is an evil that PARENTS are extremely intereſted in having remedied, and that remedy is in their own hands, if they will but apply it.

A parent ſhould never put a child to ſchool without enquiring who, and what the aſſiſtants are in point of abilities; for I need not obſerve, that the uſher has more *immediate* concern in the teaching department than the maſter, and of courſe is of as much conſequence to the parent, in that particular reſpect as the principal himſelf: on this point, Dr. Goldſmith is very urgent, and with great reaſon.

Speaking generally, teachers in ſchools are a very ill uſed claſs of men, and placed in moſt uncomfortable ſituations; and that evil ariſes from a want of ſyſtem, method, and ſtrict enforcement of ſubordination in the principal, and his ſelecting thoſe who engage with him for the leaſt money; fooliſh fondneſs and caprice in the parents, and too often, I muſt ſay, from the perſonal in-

different conduct of ſome aſſiſtants, who are the cauſe of the deſerving deſcription of teachers being equally ill treated and deſpiſed with themſelves: but there is even a complete remedy for that; no maſter whatever ſhould employ an aſſiſtant, without having an unexceptionable character of him, both in point of morals and abilities; but at the ſame time, give him a ſalary proportioned to his merits, and charge the parents with a ſmall additional ſum each, if he cannot afford to do it himſelf. I think if the matter was properly explained, thoſe who wiſh well to their children would not grudge it: but to render this effectual, parents muſt ſee the neceſſity of it, and agree chearfully to the increaſe. This, however, they in ſome meaſure ſuppoſe already to be done, ſince moſt maſters of academies make a charge of one guinea *per annum* in their Chriſtmas bills for their aſſiſtants, &c. under the idea or colour, that was not this the caſe, an unequal degree of favors might be ſhewn to the teachers, by the miſplaced affection of pupils or parents; but what is the conſequence? Many of the maſters put that money in their own pockets, to the total excluſion of the aſſiſtants!

We liberally and handſomely pay miniſters, for inſtructing *us* one day in the week; we pay them, treat them, and conſider them as gentlemen; and

and yet we hardly allow thoſe who teach our children all the week, *(who want it more than we do,)* a bare ſubſiſtence, and deſpiſe them into the bargain. I do not know an employment that ought to be more reſpected and valued than teaching, or one that is more deſpiſed and diſcouraged.—Well may our well-educated young men enter into the army, navy, or any other line, than into the academic, where there is not even the ſhadow of encouragement for them.

At the ſame time I muſt obſerve, that the backwardneſs of the pupil's friends in theſe dear times to increaſe the pay to maſters, prevents many of them from employing men of character and abilities, becauſe they cannot afford to pay them well enough. I muſt own there is much weight in this; and that conſequently the evil in a great meaſure may be traced to the parents, and with them the remedy ſhould of courſe orginate.

In order the better to facilitate the communication of inſtruction, I would always adviſe that the pupils ſhould be divided into three or four ſeparate claſſes; and regular days and hours fixed for the teaching every particular branch; for, as in private life, and with regard to our affairs, nothing can be done well, that is not the reſult of a plan;—ſyſtem, regularity, and method, are the very ſoul of the buſineſs in academies. The principal ſhould never ſhift

the pupils to one branch while they ſhould be employed in another, nor be always changing the hours, or altering the arrangements.

The claſſes ſhould always ſit as much as poſſible out of each other's hearing, where there is but one ſchool room, that the attention of the one may not be taken up with the other, or confuſion of ſound ariſe from their proximity. Teaching in claſſes is certainly the moſt eaſy to the maſter and aſſiſtants, and when you can keep up their attention, the moſt advantageous to the pupils: where a boy is particularly ſlow and backward, and conſequently cannot keep up with others, he ſhould be taught by himſelf for ſome time: emulation may at laſt induce him to exert himſelf to be admitted into a claſs. In large ſchools I would always recommend maſters to have two ſeparate ſchool rooms, one for the junior boys, and the other for the ſenior; the aſſiſtants might go backward and forward to either of them, as the ſeveral branches they taught might require it; always taking care to have one aſſiſtant at leaſt in each room at a time.

If a boy is very refractory, and extreme ſeverity is reſorted to, it often introduces a worſe diſpoſition, by breaking the mind, rendering him low-ſpirited, mopiſh, and ſullen; which, as he grows up, will make him uſeleſs and uncomfortable both to his friends and himſelf.

Children

Children naturally love liberty, and therefore they ſhould be brought to do what is right and proper for them, without feeling any reſtraint laid upon them: they muſt be cheated into learning, without perceiving it.

Curioſity ſhould be as carefully cheriſhed in children, as other appetites are ſuppreſſed; it is only an appetite after knowledge, and therefore teachers ought to encourage it in them; not only as a good ſign, but as the great inſtrument nature has provided to remove that ignorance they were born with; and which without this buſy inquiſitiveneſs, would make them dull and uſeleſs creatures.

The teacher ſhould never check or diſcountenance any enquiries his pupil makes, nor ſuffer him to be laughed at; but anſwer all his queſtions, and explain the matters he deſires to know, ſo as to make them as intelligible to him as ſuits his age and capacity. Boys ſhould alſo be commended before their play-fellows, for their knowledge in particular branches; and that *vanity* which is natural to us all from the cradle, ſhould be made the inſtrument of increaſing their deſire to learn. Knowledge is as acceptable to the underſtanding as light to the eyes, and children are extremely delighted and pleaſed with it, eſpecially if they ſee that their deſire of knowing is encouraged and commended. I believe, one reaſon why many young people

give themſelves wholly up to play and trifling, is becauſe they have found their curioſity baulked, and their enquiries neglected; had they been treated with greater kindneſs and reſpect, there is no doubt but they would have taken more pleaſure in learning, and improving their knowledge; in which there would be novelty and variety, with which they are always greatly delighted.

As children's enquiries are not to be ſlighted, care ſhould be taken never to give them deceitful and evaſive anſwers: they eaſily perceive when they are ſlighted or deceived, and quickly learn the trick of neglect, diſſimulation, and falſehood, which they obſerve others to make uſe of; we ſhould never be guilty of untruths with children; for if we deceive them, we diſappoint their expectation, hinder their knowledge, and corrupt their innocence. They are travellers newly arrived in a ſtrange country, of which they know nothing; we ſhould therefore make it a matter of conſcience not to miſlead them; children are ſtrangers to all we are acquainted with, and every thing they meet with is as juſt unknown to them, as it was once to us, and fortunate are they that meet with civil kind teachers or friends, to inform their ignorance and enlighten their underſtandings.

In order to excite their curioſity, it is not amiſs to ſet ſtrange and new things in their way

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on purpoſe to engage it to make enquiries, and give them occaſion to inform themſelves about ſuch things; and if by chance their curioſity leads them to aſk what would not be ſo proper for them to know, it is a great deal better to tell them plainly, that it is a thing they have no buſineſs to know, than to put them off with a falſehood or a frivolous evaſive anſwer.

It has been already obſerved that variety and freedom was what delighted children, and even made their ſports agreeable to them; and that therefore any thing we wiſhed them to learn, ſhould not be enjoined them as a buſineſs. This teachers and parents are apt to forget, and their impatience to have them do what is neceſſary and right, will not give them time to *deceive* them into it; for by the repeated injunctions they are laid under, children quickly diſtinguiſh between what is required of them, and what is not, and they become diſguſted accordingly. Inſtructors of youth ſhould not only be ſkilful in thoſe ſciences which they teach, but have ſkill in the method of teaching, and patience in the practice.

Beating, and all other kinds of ſlaviſh and corporal puniſhment, are not the kind of diſcipline fit to be uſed in the education of thoſe whom we would wiſh to make wiſe, good, and ingenuous men; and therefore very rarely to be applied,

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and that only on great occaſions, and in caſes of extremity. Trifling rewards, ſuch as *cakes*, *fruit*, &c. ſhould not be too often promiſed or given them, as they are apt to conſider them as of more conſequence than they are, and it will give them a habit of deſpiſing the more valuable rewards of virtue and ſelf-applauſe, at the ſame time that it tends to provoke their appetites, and make them ſelfiſh and avaricious, or perhaps greedy and craving.

Before I conclude this head I muſt be permitted to obſerve to maſters of academies, that they can never conſult their own intereſt better, than by rendering the buſineſs eaſy to their aſſiſtants, paying them liberally, and treating them like gentlemen: the more reſpectably they are treated, the more comfortable and eaſy their ſituations are made, conſiſtent with their duty to the pupils, the greater their inducements to continue will be; in time, *their* intereſt and their principal's will become inſeparable, and the credit of the ſchool increaſed in proportion to their continuance; in fact, it is the maſter's trueſt intereſt ſo to arrange their duties, as to make them eaſy and pleaſant to his aſſiſtants, and to pay them *well*.

This has always been with me the trueſt criterion to judge of a maſter's good ſenſe; for thoſe who are ignorant and blind to their own intereſt,

intereſt, will be continually changing, either through jealouſy of ſuperior talents, or a miſtaken idea of economy, never keeping one teacher more than the half year, or five months rather that the ſchool is open, in order to ſave the expence of his wages, board, &c. in the month's holidays; and this I have reaſon to believe is a very common *trick* among the meaner claſſes of academicians, much to their diſcredit and injury, though they may think otherwiſe.

SECT. II.

Day Schools.

THE Art of Teaching applied to day-ſchools, conſiſts rather in the difference of the arrangements the maſter ought to make, than in any actual variation in the principles of the art. The general rules, and thoſe under the head of boarding-ſchools, with the rules and obſervations applied to the ſeveral branches of education, will furniſh him with every neceſſary information reſpecting the practical part of the buſineſs.

Where a large number of pupils are collected together, and but few aſſiſtants in proportion, the moſt effectual method of communicating inſtruction, is by dividing the whole number as much

much as poſſible into large claſſes, and having regular hours of the day for their ſeveral particular ſtudies. Syſtem and method in day-ſchools are particularly neceſſary, becauſe the hours for buſineſs are fewer than in boarding-ſchools; and from the neceſſity the pupils are under of going home to their meals, and their being immediately after ſchool hours from under the maſter's reſtraint, he cannot ſo well confine them, to make up for loſt time, or to learn the leſſons they have neglected; not to mention the uncertainty and irregularity of their general attendance, as well as the little controul they are under (compared to pupils at boarding-ſchools) when they do attend.

Reading, writing, and arithmetic, with a little French and Latin perhaps, being the principal objects in a day-ſchool in general, the hours may be eaſily divided, ſo as to take in all theſe branches, and give the pupils at leaſt one leſſon a day in each.

Were I at the head of a reſpectable day-ſchool, and with only one aſſiſtant, I would employ *him* in teaching writing, and accompts only, while my own attention ſhould be fixed to Engliſh grammar and reading, French, Latin, &c.; and I would ſo divide and arrange all my pupils, that the ſeveral claſſes individually, ſhould be as nearly as poſſible on a par in age and talents; nor ſhould one part of a claſs be writing

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or cyphering, while the other part was reading, or ſtudying Latin or French: a whole claſs ſhould write together, read together, cypher together, and, in ſhort, learn every thing together.

I have ſeen ſome maſters teaching one diviſion of a claſs Latin, while the other diviſion has been engaged in arithmetic, or ſome other branch; conſequently one diviſion loſes, or at leaſt learns but indifferently that Latin leſſon.

I would alſo make it a principal point, to enforce the cloſeſt attention of all the members of a claſs to whatever was going forward, and to keep that attention up, by often calling upon a boy to tell me what had juſt been obſerved or ſaid: attention is a habit that may be thus mechanically acquired, and rivetted in the mind of the pupil.

The attendance, attention, and good conduct of the pupils, depend more on the exhortations of their parents at home, than the advice or correction of the maſter; and it would be well if parents would pay the proper regard to this circumſtance.

SECT.

SECT. III.

Private Tuition.

In communicating inſtruction by private tuition, there is a great advantage to the teacher over ſchools, (not that I mean to ſay a private education is better than a public one, I think quite the reverſe,) becauſe he is neither perplexed with noiſe, or confounded with numbers: he can with more eaſe, tranquillity, and effect, impreſs the mind of his pupil, and, from his not being in the way of bad example, can be better reſtrained from doing what is improper.

A tutor's duty is to conſider himſelf in the parent's or guardian's place, and to be conſcientious; to ſet the beſt examples to his pupil, and endeavour as much as poſſible, to prevent the influence of bad ones that may fall in his way; the moſt dangerous in general is that of ſervants, and every poſſible means muſt be uſed to keep him out of their way. If the tutor will begin at firſt to put theſe things in practice, he will afterwards find the work become eaſy.

The firſt thing he ſhould attend to is the ſtudy of his pupil's diſpoſition, and diſcovering whether he is moſt to be worked upon by kindneſs and lenity, or the contrary; he ſhould then proceed

ceed to fix his attention and bring him into proper ſubordination, rather by kindneſs and attractive means, than by fear or compulſion. Some boys, by the unalterable frame of their conſtitutions, are confident, forward, and bold, others timid, tractable, and modeſt; ſome are curious and inquiſitive, others careleſs and indifferent; there is not more variety in men's faces, than there is in the make and temper of children's minds, and they muſt be dealt with accordingly.

The duty of a tutor is peculiarly important, and differs from that of a teacher in a ſchool, inaſmuch as he is more immediately entruſted with the entire conduct of his pupil, both as to morals, manners, and learning; and he ought to be proportionably the more ſucceſsful in his education, as he has no other pupils to divide and diſtract his attention.

A tutor ought to be a man of unblemiſhed character and good breeding, well acquainted with the world, and qualified by ſobriety, temperance, tenderneſs, diligence, and prudence, to ſet that good example, which he ſhould inſtruct his pupil to admire and follow.

Nothing is more hurtful and prejudicial to young people, than frequently changing their maſters or tutors; therefore a proper one ſhould be looked out for at firſt, and not parted with upon any account, if poſſible: in that reſpect a man ſhould

ſhould be as particular as in the choice of a wife, knowing that he cannot change her when he will: more than ordinary care ſhould indeed be taken in the choice of a tutor.

A tutor ſhould begin early to obſerve his pupil's temper, eſpecially when he is under the leaſt reſtraint; ſee what are his predominant paſſions and prevailing inclinations, whether he is untractable or mild, bold or baſhful, compaſſionate or cruel, open or reſerved, &c.: for as theſe qualities may happen to be different in him, ſo the tutor's method muſt be different, and his authority muſt be exerted in different ways over him.

In general, children educated at home by a tutor, are difficult to manage and reſtrain within bounds, from their being ſo near their parents, who, I believe, uſually recommend indulgence more than ſeverity; in that caſe, his aim muſt be to gain his pupil's good will, and acquire an aſcendancy over him by that means.

He that takes upon him the charge of bringing up young gentlemen, ſhould have ſomething more in him than mere Latin and Greek, or even a knowledge in the liberal ſciences; he ſhould be a virtuous and prudent man, endued with good ſenſe and good humour, and poſſeſs the art of conducting himſelf with gravity, eaſe, and kindneſs, at the ſame time, in every thing that concerns his duty to his pupil; he himſelf ought

ought to ſet the example of thoſe things which he wiſhes his *Eléve* to follow, and not be under the neceſſity of adviſing him to do what he tells him, and not what he ſees him do.

I would adviſe parents to be ſparing in dreſs, amuſements, trinkets, equipage, the table, or in ſhort, in any thing, but that of procuring and paying well accompliſhed tutors for their children; in that they ſhould not put any limits to their expence, as it will amply repay them.

SECT. IV.

Parents inſtructing their own Children at Home.

PARENTS who are capable of and undertake to teach their own children at home, have many advantages over the public ſchool or private tutor. In the firſt place, they have full authority over the child by nature and by law, if they chuſe to exert it; they have alſo the advantage of duty and affection in the pupil, to ſecond their endeavours and give them effect; to which I may add, that natural earneſtneſs and deſire for their improvement, which a hireling or ſtranger cannot be ſuppoſed ſo genuinely to poſſeſs. They have alſo the further advantage of having them conſtantly under their eye, and

and every poſſible opportunity of ſtudying their various bents and inclinations.

By being taught at home, the pupils alſo ſave much time and expence, as well as have opportunities of becoming earlier accuſtomed to company, and the knowledge of the world. Parents will alſo make a greater conſcience of the duty, from having their children's intereſt more at heart.

In addition to the rules I have laid down for teachers in general, I would obſerve to parents, that the fear of being too indulgent is one objection to their inſtructing their own children, though certainly nature intended it to be the caſe; but on the other hand I ſhould hope, that the affection and tenderneſs which they muſt feel for their offspring, would lead them to take thoſe meaſures of encouragement and attractive kindneſs without improper indulgence, which are preferable to keeping them under by fear and terror.

The conveniencies, comforts, and tranquillity which are generally to be found in private families, are alſo other advantages in the education of youth, and tend much to facilitate the buſineſs of teaching. The quiet of the country is certainly preferable to the buſtle of town; but even in towns there is much to be learnt, as it is proper to ſtudy man, as well as books, or nature. Regular families can always

ways enſure ſufficient time to give two or three leſſons a-day to their children, except indeed they are obliged to work very hard for a living; but it is not for that deſcription of parents that this plan is ſuppoſed to be practicable.

I have obſerved a very good effect attend the ſending boys of from eight to twelve years of age to Weſtminſter, the Charter-houſe, St. Paul's, or ſome other good public ſeminary, during the uſual ſchool hours, for the benefit of the claſſicks, and teach them the other branches at home in the evenings, and on holidays; of which there are many in the public ſchools. This is a judicious plan, as it fills up all their time, and gives them the advantage of a public education, without the vices of it; at the ſame time that it places them out of ſchool hours under the immediate eye of their parents, and give them various opportunities of mixing in company, executing little commiſſions of buſineſs, and otherwiſe acquiring experience and acquaintance with the world.

In point of health, they have the advantage of good exerciſe and good food, the being accuſtomed early to the air and atmoſphere of a town, in which moſt probably the ſcene of their future concerns will lie, and to keep moderately late hours; the change of air and hours at the firſt coming to London, being always injurious to young people. Theſe obſervations are, how-

ever, only applicable to thoſe who are likely to ſpend their lives in town.

Their clothes, linen, perſons, &c. are better taken care of, and above all, the knowledge of a particular vice which I almoſt tremble even to hint at, much leſs to name, is avoided. Its fatal conſequences are miſery of mind and body through life, deſtruction to all the faculties, and probably perdition to the ſoul. Some eminent writers on that ſubject, ſhould be read by parents and teachers. It cannot be too particularly guarded againſt, and all falſe delicacy ſhould be put out of the queſtion, when the happineſs and health of our deareſt relatives are at ſtake.

I have ſeen the children thus educated, I mean partly at a public ſchool and partly at home, make a very rapid progreſs, and at the ſame time without any great trouble or neceſſity for ſeverity on the part of the parents; indeed quite the reverſe: they have made them do every thing by kindneſs and good will, and treated them as friends and companions. Educated in this way, they ſooner acquire manly thoughts and habits; their ſpirits are not apt to be broken, nor their health injured by the confinement that boys ſuffer in boarding-ſchools.

It muſt be confeſſed that the emulation which prevails where children are convened together, gives

gives a ſchool a decided ſuperiority over private education; but where both the public and the private can be in a manner united, as on the plan I have mentioned, I certainly think the pupils will ſtand the faireſt chance of ſucceſs in their education, and of acquiring an early knowledge of the world. It is to be obſerved, that parents of even inferior knowledge and abilities, may teach their children much better than is generally imagined; for inſtance in the claſſics, what is ſo eaſy as to procure an edition of Ovid, Virgil, or Horace, with an *ordo* and *tranſlation* to check the pupil by; or in making Latin, to take Mr. *Tocquot*'s key to Clarke's Exerciſes, and correct their Latin: it hardly requires much knowledge of the language to do this.

The ſame with reſpect to French or any other language, except as far as relates to the pronunciation.

Arithmetic may be managed alſo in the ſame manner, by means of the key to Walkingham's Tutor's Aſſiſtant; and the Elements of Euclid, I mean the firſt book or two, may be taught without much difficulty.

Writing is very eaſily communicated in the common way, or by having copy-books ruled with red ink or other coloured lines, and ſtrokes, letters, words, or ſentences, ſet the pupil in a different coloured ink for him to go over with black ink: order a plate to be engraved with the characters of ſuch

hand as you like beſt, but formed a good deal larger than the pupil would commonly write, as every one naturally comes by degrees to write a leſs hand than he was at firſt taught, but never a bigger: let ſeveral ſheets of paper be printed off with red ink, which he has nothing to do but to go over with a good pen filled with black ink: and which will quickly bring his hand to the formation of thoſe characters; being at firſt ſhewn where to begin, and how to go over every letter: when he can do that well, he may then exerciſe on fair paper, and ſo may eaſily be brought to write the hand you wiſh: but you muſt teach him how to hold the pen, and how to ſit, &c. as deſcribed under the head of writing.

SECT. V.

Perſons ſtudying without a Maſter.

To perſons ſtudying without a maſter, I ſhall, under each ſeparate branch, point out the books proper for them to uſe; and it is further neceſſary to obſerve, that with reſpect to the claſſics they ſhould always procure thoſe editions of the work they mean to ſtudy, as have both an order, notes and tranſlations; but without making any further uſe of them, if poſſible, than examining to be certain, where they have any doubts of

of a word or paſſage; the dictionary, and reading the ſentence over two or three times carefully, to obſerve the general ſenſe or meaning of it, muſt be their uſual aſſiſtants if they have made any progreſs at all.

With regard to Latin exerciſes, there is a book lately publiſhed by Mr. Tocquot, and alluded to in the laſt ſection, which I would ſtrongly recommend to perſons ſtudying by themſelves, in order to acquire or regain a knowledge of making Latin; it is a key to Clarke's and Turner's Exerciſes. The various ſentences are turned into proper Latin, or rather the particular paſſages extracted from the different authors, are given exactly as they ſtand in the originals. To this corrected book the ſtudent may refer upon any doubt or great difficulty ariſing, but upon no account ſhould it be always reſorted to; the moſt advantageous way of uſing it, is firſt to make the exerciſe, and then to correct it by that key.

It has been often obſerved, that even an old woman might learn Latin by looking conſtantly at the prayer-book and bible in Latin, while the miniſter or any other perſon reads them in Engliſh; and from them proceeding to Corderius, Eſop, and other eaſy authors, might thus go through all the claſſics: there is a good deal of reaſon in the obſervation, and I would adviſe ſtudents to follow that plan as much as poſſible, but remembering at the ſame time, that it will

not teach the grammar or the ſyntax: the attainment of theſe two objects muſt be the reſult of their own application and induſtry, committing carefully to heart every thing neceſſary to be learnt for that purpoſe, the particulars of which, their own judgment, and the rules laid down in this work, will point out to them.

In thus ſtudying the modern languages, a conſiderable difficulty will occur with reſpect to the pronouncing them with propriety; and the objection cannot be thoroughly got over with all the ſtudent's diligence and attention; however he may in a great meaſure, make out the pronunciation of the greateſt part of the words he meets with, and Veneroni, in his Italian Grammar, has laid down ſuch preciſe and clear rules for the pronunciation of the Italian language, that any perſon acquainted with Latin and French, will be at no great loſs to make it out: the Spaniſh and Portugueſe grammars have generally the ſame guide as to the pronunciation, any bad habits of which, may be afterwards cured by obſervation and converſation. The French language is extremely difficult to acquire without a maſter, if ever at all, on account of the niceties in the pronunciation and idiom; but ſtill as well as any other language, it may be ſo acquired, that the ſtudent can underſtand the ſenſe of what he reads, and even make himſelf underſtood in converſation. Such

ſtudents

ſtudents ſhould procure tranſlations of the ſeveral books they mean to go through, and read over a paragraph firſt in Engliſh, then in the language they wiſh to learn; and any words that they do not thoroughly underſtand the meaning or conſtruction of, they ſhould take their dictionaries and carefully examine them.

There are always a certain ſet of words, which often occur in reading an author, and that do not change their caſes or terminations; theſe will be ſoon got acquainted with, and in time help him to make out the general ſenſe of a ſentence or paragraph. I have ſeen a maſter of an academy, without being able to pronounce or read the French language with any tolerable degree of correctneſs, hear his pupils their tranſlations, and even correct them where wrong, with the greateſt preciſion. Every ſtudent has not an ear to catch a ſound correctly, but he has the uſe of his eyes and thinking faculties, added to the advantages of a dictionary, and literal, or at leaſt very plain tranſlations. All languages are beſt learnt by ſteady perſeverance in the grammar, and by converſation.

In order to attain a perfect knowledge of Engliſh grammar, the ſtudent may take *Linley Murray*'s (lately publiſhed) Exerciſes, in falſe Engliſh, and at the ſame time the key to it, by which he may correct his own errors after he has written the exerciſe. I do not know a better

ter calculated book for a perſon ſtudying the Engliſh language by himſelf.

In addition to what I have obſerved on the ſubject, under the head of parents teaching their children, in learning to WRITE by himſelf, the ſtudent may procure copper-plate copies of all ſizes and hands, books ruled in any way that he may wiſh to have them, both double and ſingle lines for text and running-hand: pens he may alſo have ready made to his hand, if he cannot make them himſelf; therefore he has nothing to do, but to ſit down and imitate as nearly as poſſible the copy he ſelects for the purpoſe, remembering the four leading principles which are the ground-work of writing, and which he will find pointed out under the head of writing, to which I refer him.

In learning arithmetic, the ſtudent may procure Walkingham's Tutor's Aſſiſtant, with the key; which will correct him in the ſame manner, that Mr. Tocquot's Key to Clarke's Introduction will correct his claſſical exerciſes. As to merchants' accounts there are ſeveral treatiſes upon that branch, and he may ſelect whatever ſyſtem he conceives will be moſt uſeful to him; there cannot be much difference on that point; but I believe *Dilworth*'s and *Booth*'s to be as good as any that are publiſhed.

In the ſtudy of geography, *Turner*'s ſyſtem ſhould be firſt made uſe of; it lays down in a very

very plain and conciſe way, the ſeveral leading principles of the ſcience; and his ſyſtem of aſtronomy is equally proper for a perſon ſtudying without a maſter; his explanations being clear and intelligible to any pupil, that will take the trouble to think, and examine his obſervations with attention.

Guthrie's grammar may then be proceeded to, the introduction to which is extremely well calculated to guide the ſtudent to a more general acquaintance with the ſcience of geography and aſtronomy: a ſmall pair of globes may alſo be procured, and the principles laid down in theſe ſyſtems practically examined.

The ſciences of geography and aſtronomy are naturally very circumſcribed, and lie within a ſmall compaſs, owing to the uncertainty and doubt that muſt attend moſt of our ſpeculative ideas on the ſubject: what is really known and conſidered to be correct, will be found in theſe two authors; which will be quite ſufficient to make the ſtudent pretty well acquainted with the ſubject.

He may alſo accuſtom himſelf to point out, on large maps, the counties of England, Scotland, and Ireland: and then the principal diviſions of Europe and of the other quarters of the world; and to trace out the principal rivers and mountains: this kind of practice will by degrees

degrees enable him to be ready at it when moſt wanted.

Under the head of Geography, he will find ſome further obſervations that will be uſeful to him.

Hiſtory is very much aſſiſted by geography, and therefore it ſhould always be preceded by it. *Rollin*'s Ancient Hiſtory, is very well calculated to aſſiſt the ſtudent's views.

In ſtudying hiſtory, it is beſt to begin with the Roman and Grecian, or any other that more immediately relates to the four firſt great empires of the world, deſcending gradually to the riſe, progreſs, and eſtabliſhment of the preſent kingdoms of Europe, from the fall of the laſt: the chaſm made in the ſeries of hiſtory by the dark ages muſt be carefully noticed.

A compendium of Engliſh hiſtory ſhould precede that of foreign nations, ſuch as Goldſmith's, or ſome other equally conciſe; and then an abridgement of the hiſtory of other modern nations. It is alſo the moſt advantageous way of ſtudying hiſtory, to finiſh that of one epoch, age, empire, or country, before you proceed to another; and as you go along, to make memorandums of the moſt ſtriking occurrences you meet with, and their dates; (the mere dates of hiſtory are however very inſignificant; the uſeful part is an account of the moſt intereſting

ing and important events which have happened among mankind, with the cauſes that have produced, and the effects which have followed from them;) by which means you will better impreſs the recollection of them on the memory, nor ſhould the more copious and enlarged hiſtories be attempted, till you have made yourſelf well acquainted with the abridged authors, and habituated yourſelf to a mechanical kind of recollection of what you read, by taking notes and making obſervations, whenever you come to a ſubject that is intereſting or worthy of attention.

In ſtudying the mathematics, I would adviſe the ſtudent to make himſelf compleatly maſter, in the firſt place, of the terms and definitions uſed by Euclid in his firſt book, and then proceed to practiſe them on a ſlate, as they ſtand in order. I would then recommend to the young beginner, to practiſe in the ſame way all the various figures that do not require the nicety of the compaſs, till he could at once form any of the figures he wiſhed, without looking at the book.

In the ſtudy of any particular ſcience or branch of learning, ſuch as chemiſtry, botany, natural philoſphy, &c. it ſhould be the pupil's firſt buſineſs, to procure the beſt abſtract author on the particular ſubject he is about to enter upon; compendious abridgements of voluminous

nous works, or well ſelected collections from different authors on the ſame ſubject, are always beſt adapted for perſons ſtudying by themſelves, and for beginners under maſters; becauſe having, without much of that perplexity or confuſion of ideas, always attendant upon the ſtudy of voluminous compoſitions, acquired the general outlines and principal heads of the ſcience, and impreſſed them on the memory, they can with eaſe proceed to extend, and dilate the ſphere of their examination and reſearches.

In purſuing this method, it is likewiſe adviſeable for the ſtudent always to make memorandums of any circumſtance that particularly attracts his attention, or concerning which he may appear to agree or diſagree in opinion with the author; any improved idea of his own that may ſtrike him, or in ſhort, any point or obſervation that he would wiſh to impreſs on his mind and remember.

It is alſo a good plan, to take notes as he goes along, of all the principal heads and ſubdiviſions of a work, of the dates, and other ſubordinate matter that can tend to aſſiſt his memory, and facilitate the aſſociation of his ideas, like the ſteps of a ladder, every one of which aſſiſts the workman to aſcend the reſt.

The laſt particular I would recommend to the ſtudent is, to ſtudy the ſciences in French, Latin,

Latin, or any other language that he wiſhes to keep up or perfect himſelf in, as by ſo doing he gains two points at the ſame time: if he is not ſtrong in the language, a *tranſlation* might be uſed to refer to occaſionally.

SECT. VI.

The Education of young Gentlemen in the Royal Navy: —with uſeful Hints to their Parents, and to School-maſters in the Navy.

THE attention paid to the education of YOUNKERS, or Youngſters, (as they are termed) in the royal navy, is very uncertain, and at beſt but trifling. It is the captain's duty to ſee that they are properly taught Engliſh grammar, writing, and accompts, French, and the elements of the mathematics, to lay the foundation for navigation; but, in general, though the captain may mean well, and even endeavour to have it properly done, yet there are ſo many circumſtances that occur to interrupt, if not totally to prevent the accompliſhment of his wiſhes, that it is not to be wondered at, if the object is not attained; notwithſtanding in many ſhips, the captain himſelf, as well as the lieutenants, frequently take one or two each under their particular care, and inſtruct

inſtruct them as they find opportunity, independent of what they are taught by the ſchool-maſter, if there happens to be one.

The little encouragement given to ſchool-maſters employed in the navy, added to their ignorance in general of almoſt every thing but navigation, and the extreme youth of thoſe, who are commonly ſent from CHRIST'S HOSPITAL to fill theſe ſituations, renders the improvement of young gentlemen at ſea, or even their retaining (for want of practice) what they may have already learnt at ſchool or at home, very precarious; except indeed, a properly qualified ſchool-maſter is procured, and to whom it is made worth while to undertake a buſineſs, that in port and in the beſt of weather is not very agreeable, but at ſea and in bad weather, if attended to at all, is beyond deſcription unpleaſant: indeed in very bad weather, it is impoſſible to pay any attention to the youngſters at all, eſpecially in frigates. In ſhips of the line they may be able to do ſomething even in bad weather, as their ſchool-room accommodations are better, and more likely to make it bearable to them.

I am ſorry to ſay that drinking is too common a complaint made againſt ſchool-maſters in the navy, and that however it may be pleaſing or uſeful to themſelves, in drowning care and thought, keeping out the cold, or enjoying the ſociety of their meſs-mates; yet it is totally deſtructive

ſtructive of their authority over the young gentlemen who are placed under their direction; and beſides ſetting them the worſt and moſt dangerous example that can be held up to their view at ſea; it diſqualifies their inſtructor from attending to his duty next day, or diſcharging it with any tolerable degree of advantage to his pupils.

Inebriety at ſea, is ten times more criminal and dangerous than on ſhore, as the lives of a whole ſhip's company, are ſometimes at the mercy of a man in liquor. It were alſo very much to be wiſhed that the ſchool-maſters of men of war, inſtead of winking at, or joining in the odious ungentlemanlike practice of ſwearing on every trifling occaſion, would diſcountenance it in others, and diſcontinue it themſelves: and above all, prevent, by every means in their power, the youngſters under their care, from practiſing it. All indecency of conduct and language ought alſo to be ſtrictly prohibited and prevented.

It is the ſchool-maſter's buſineſs to teach them good manners and behaviour, as well as mere navigation, which, after all, is more frequently better taught them practically by the officers, than theoretically by himſelf.

It may be urged againſt this, that it is impoſſible to reſtrain young lads at ſea, and that they will ſwear, drink, and talk indecently, as

well as grown people about them, whom they ſee and hear practiſing the ſame improprieties; either becauſe cuſtom, and the rough habits acquired at ſea, have ſanctioned it, or becauſe there is too much licence allowed them, and too little notice taken of it by their ſuperior officers. To this I anſwer, that in a well diſciplined ſhip, that need never be the caſe, except the ſchool-maſter himſelf wiſhes it to be ſo; and I do not ſpeak upon ſlight grounds, I ſpeak from my own experience, as a ſchool-maſter of a man of war; where, notwithſtanding the bad examples ſet by others in their meſs, and by thoſe around them, I not only brought ſeven youngſters, from ten to ſixteen, moſt completely under ſubordination, both in ſchool-hours, and at other times, but alſo totally broke them of the habit of ſwearing, and talking indecently, at leaſt within my hearing, or any of the better-diſpoſed part of the ſhip's company; but had I given way to ſwearing and inebriety myſelf, I could not have effected that change in them. This was done without making a ſingle report or complaint to the captain, (a nobleman of high rank in this country, whoſe clerk I alſo was at the ſame time,) and much leſs reſorting to puniſhment:—it was by the force of good example, earneſt and good advice, kindly and politely adminiſtered, mixed with ſome ſhew of ſpirit and authority in enforcing it. They had

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ſenſe enough to ſee that I meant them well, and did my duty; that enſured their obedience and reſpect, and always will; and much more ſo in a man of war than on ſhore; becauſe if their natural inclination is not to do what they ought, you have immediate reſort to diſgrace and puniſhment, far more ſerious and effectual than in ſchools on ſhore.

With reſpect to the care of their perſons, clothes, and linen, which it is alſo ſometimes expected of the ſchool-maſter to ſee them attend to, there can be no great difficulty about that.

When the ſchool-maſter joins the ſhip, if it be expected of him, he ought to make every youngſter deliver him an inventory of the contents of his cheſt, and examine the articles once every fortnight or ſo; taking care whenever the ſhip comes into port, to ſee that they each make a bill of their foul linen, and have it all ſent together, tied up in ſeparate bundles, ticketed with their names, and the contents, to the beſt and moſt to be depended upon waſher-woman in the place, fixing a day for its being done and ſent off to the ſhip; which day ſhould always be three or four at leaſt before ſhe is expected to ſail; as by that means he will avoid its being left behind till they next come into port, which too often happens, and perhaps the linen is totally loſt.

With reſpect to cleanlineſs in their perſons, he ſhould never ſuffer them to come to the meſs table, or into the ſchool cabbin, without very clean hands and faces; he ſhould inſiſt on their keeping their heads perfectly clean; and when opportunity ſerves, make them waſh themſelves from head to foot: and as nothing is ſo neceſſary on board as cleanlineſs, he ought to be the more particular about it, by no means permitting them to mix among the men, or frequent the galley fire, except duty requires it.

The ſchool-maſter ſhould alſo always take good care, that in whatever meſs they are, or how much ſoever divided in that reſpect, they ſhould never be permitted to receive or manage their own allowances of *wine* or *ſpirits*; it of courſe belongs to the meſs they are in: and a younker ought never to be ſuffered to drink more than two glaſſes of wine after dinner, or one glaſs of weak grog: if the beer is good, let him drink of that as much as he pleaſes.

Some attention ſhould alſo be paid to their bedding, to ſee that it is kept dry and ſweet, and as often as the hammocks are piped up, to take care that their's be among the reſt; for ſometimes, through mere idleneſs, they will themſelves neglect to make the main-top-men, or whoever are appointed to that duty, carry them up, if they are not looked after, from time to time,

time, eſpecially thoſe who ſleep in the cable tiers: any neglect of this kind ſhould be ſtrictly reported to the firſt lieutenant.

When the hatchways are open, the youngſters ſhould always be cautioned againſt playing inadvertently near them; and care ſhould be taken at the ſame time to tighten a rope round them, to prevent, if poſſible, any of them falling through. I lately ſaw an inſtance of a youngſter falling down the main hatchway, in running backwards at play, and had not ſome empty bags and ſpare hammocks broke his fall, he muſt have been daſhed to pieces, or at leaſt have had his back broken.—Upon that occaſion the cry was, and very obviouſly, why not tighten a rope round the hatchways when opened, to prevent ſuch accidents?

Another thing I have to obſerve is, that whenever the ſchool-maſter perceives an improper growing familiarity between any of the younkers, he ſhould immediately ſeparate their births, and forbid their being ſeen together in private, or laying hands on each other. On this head I ſpeak very ſeriouſly; it is a matter of the laſt importance, and I have myſelf had occaſion to put the advice I am now giving in practice, under ſimilar circumſtances. Where there is any ſuſpicion, every means ſhould be purſued to aſcertain the truth, and the moſt earneſt and impreſſive advice given them upon

a ſubject, which delicacy forbids me entering farther into in a work of this kind, however neceſſary to the welfare and happineſs of thouſands it may be, to ſpeak more explicitly about it.

This hint, I hope, will anſwer the purpoſe I intend it, to teachers of all deſcriptions, and indeed to parents, and every perſon concerned in the care of youth.

I have been the more particular on the ſubject of the conduct and care of young gentlemen in the navy, becauſe I know ſuch a *manual* of advice to their ſchool-maſters is much wanted; and with reſpect to the teaching part of their duty, in addition to the general rules I have already laid down, and the obſervations on the ſeveral branches of education which are to follow, I ſhall now mention ſome others, that particularly apply to their ſituations, ſo different from thoſe of teachers on ſhore.

You are firſt to conſider, that your pupils are no longer ſubject to ſchool diſcipline; but being under martial law, your reſort, in caſes of abſolute and extreme neceſſity, is to the captain's authority; to whom it is your duty to report the idle and diſobedient for puniſhment, which *he* will cauſe to be inflicted in the manner and degree that he may judge proper;—*you* are by no means to ſtrike a younker yourſelf.

In teaching navigation, it will be found moſt advantageous to the pupil in the end, to begin by making him well acquainted with the elemental

mental part of Euclid, and not ſuffering him to attempt any thing elſe till he has got the *definitions, axioms,* &c. perfectly by heart, and can with the utmoſt readineſs deſcribe on paper, or a ſlate, every line and figure neceſſary for him to know, where the nicety of the compaſs is not at firſt wanted.

As navigation is an amuſing and pleaſing art you will find no great difficulty in gaining your pupil's attention to it, and leading him on to a compleat knowledge of the ſcience, by kind and attractive means.

It is impoſſible to lay down any better ſyſtem or guide to the attainment of it than are already extant, ſuch as Hamilton Moore's, Robertſon's, Atkinſon's, &c.: theſe, however, being rather calculated for grown perſons, or at leaſt for pupils who are not quite young, ſomething, I think, upon a ſmaller and eaſier ſcale might be drawn up, better adapted to the youngeſt claſs of ſea youth; however, the teacher has it always in his power to write out for them the elemental parts of the ſcience, in a clear, conciſe, and perſpicuous manner, on his own plan; rendering plain to their underſtandings any thing that might not appear quite ſo intelligible in the larger works which may be put before them *.

* There is a work publiſhed by Mr. Kelly of the Finſbury Square Academy, intitled Spherics, &c. which in this view would be found very uſeful, as it contains an Introduction to *Nautical Aſtronomy* upon the principles I allude to.

It is not my intention to enter into the particulars of the ſtudy of navigation, as it is a ſcience ſo much reduced to a certainty, (except indeed in that moſt important point of all, preciſion with reſpect to the longitude,) and contained within ſo narrow a compaſs, added to the very maſterly works already publiſhed on the ſubject, that it is quite unneceſſary, and indeed impoſſible in a work of this kind to do it: all that I can attempt is, to lay down ſuch general rules for the guidance of the maſter, as may enable him, with the aſſiſtance of ſuch able publications as we have in every branch of that ſcience, to lead his pupils on with pleaſure and facility, to the acquirement of the particular objects he may have in view for them.

Before I ſuffered the pupil to enter upon navigation, I would endeavour to make him well acquainted with the principles of geography and aſtronomy, as introductory to it. I would alſo give him a general view of the origin, and the improvements that have been progreſſively made in the ſcience of navigation, from its firſt riſe among the *Phœnicians*, to its preſent almoſt perfect ſtate of maturity in this country. I would deſcribe to him the firſt attempts that were made along the coaſts of Africa, where navigators were near three years employed in exploring from the Red Sea to the mouth of the Nile.

I would inform him that they had nothing but the heavenly bodies, and the prominent parts

parts of land for their guides in theſe ſurveys; and that conſequently they could never venture to go out of ſight of land; but that the diſcovery of the mariner's compaſs, in the year 1302, by *Givia* of Naples, emboldened other navigators, by degrees, to leave their native coaſts, and explore the ocean. I would deſcribe to him very minutely the nature and particular uſes of the compaſs, and the properties of the needle, ſhewing him the inſtrument itſelf, and giving him a compleat idea of it; it is not enough for the maſter to ſit down and explain ſuch points as theſe to his pupils, without practical demonſtration being given them at the ſame time. The nature and virtues of the *magnet* ſhould be particularly explained to them.

In telling a young pupil that a circle is round, the teachers ſhould at the ſame time demonſtrate it to him, and convince his *eyes* by putting into his hand a round piece of money, wood, or any other ſubſtance.

In telling him that a globe is a ſolid round ſubſtance, put into his hand at the ſame time an apple, a marble, or a ball, to convince him the more effectually.

I would then inform him, that in conſequence of this important diſcovery, navigators being emboldened, had traverſed the vaſt Atlantic and Southern Oceans, where, for many weeks together, they were out of ſight of land, and ſolely guided by the compaſs and the ſtars, had diſcovered

In beginning to teach any particular branch of education, the maſter ſhould firſt explain to the pupil the nature, uſes, and advantages of it:—for inſtance; in teaching navigation, he ſhould firſt inform him that it is a ſcience, which inſtructs men to guide and direct a ſhip from one port to another, or from one country to another, in the ſhorteſt and ſureſt way, by means of the helm or rudder, the action of the wind on the ſails, and the keeping a proper reckoning: he ſhould then *ſhew* him the helm, deſcribe its uſe to him, and explain how in large veſſels it is worked by the wheel, where one or two men conſtantly ſtand, when the ſhip is under way, to perform that duty. I would then inform him what it was to *cun* the helm, ſhewing him at the ſame time the wheel at work, and telling him that from its ſhape it was calculated to cut the ſhip's way through the water, and ſteer her courſe, according to the direction given it by the men at the wheel, and the ſtate of the wind.

I would then deſcribe to him the nature and properties of the wind, how it acts upon the ſails, and conſequently upon the ſhip's courſe. If maſters (as I have before obſerved) would attend more particularly to *firſt principles* in every thing they teach, pupils would be better informed and eaſier taught; to illuſtrate my meaning in this caſe, for inſtance, I would not con-

fine

fine myſelf to ſpeak of the *wind* merely as an element that blows and impels, but I would inform him that it was the particles of the air (inviſible however to our groſſer eyes,) impelled and put into motion, by cauſes which men have not yet diſcovered the nature of; and as one little piece of knowledge conducts to another, I would explain to him *why* we are not able to ſee thoſe particles of air, and what it is that occaſions the deficiency in our ſight; from which the maſter might take occaſion to explain to him the nature and uſes of magnifying and microſcopic glaſſes, invented to remedy that defect. I would alſo explain to him why the wind is more boiſterous at ſea than on land.

The mode of keeping the reckoning ſhould then be explained to him, as being done by finding the latitude and longitude; deſcribing it to him as being performed either by celeſtial obſervations, or by the dead reckoning, calculated from the *compaſs* and the log-line; the nature and uſe of both which, I would minutely deſcribe to him, and at the ſame time ſhew him the practical effect of them, when the lead is throwing, or the variations of the compaſs calculating.

Let any indifferent perſon aſk many of our ſea youth, even grown midſhipmen, what navigation is; and their anſwer would very probably

bly be, that it was ſomething that related to a ſhip, without being able to define exactly what it was; it is ſuch little circumſtances as this that I would always ſtrictly attend to in teaching, in whatever branch I was engaged: to make the fundamental principles clear and plain to ſcholars, is to make them half acquainted with the ſcience.

I have reaſon to think that many of our more experienced claſſes of ſea youth, would be very much at a loſs to deſcribe upon what mechanical principles the helm is worked, and the ſhip moored and unmoored, or in other words, the anchor hove out and taken in:—the ſame of the compaſs and the quadrant.

From whence may this deficiency be ſaid to ariſe? From natural want of curioſity in the firſt place, and from ſuperficial inſtruction in the ſecond place; the former is to be remedied by leading or attracting the attention of the pupil to the point you wiſh him; and the latter reſts with the teacher, by beginning always with explaining the primary, and then the ſecondary principles, and ſo on progreſſively to the leſs important features of the ſubject, whatever it is.

I have been all along ſuppoſing that the ſea pupil has been pretty well inſtructed in the principles of geography and aſtronomy; and I ſhould hope that the ſame ſtrict attention to the

firſt

firſt principles of theſe ſciences would be paid by the maſter as to navigation itſelf.—In teaching them theſe two ſciences, as well as every thing elſe, I would, as the French emphatically term it (*rémonter à la ſource,*) begin at the very fountain head: for inſtance, I would, in addreſſing my pupil, inform him that the word geography is derived from two Greek words, *gé*, the earth, and *graphos*, a writing or deſcription of; that the ſcience firſt originated with the Egyptians; and that they conceived the idea of it from the neceſſity they were under from the overflowings of the river Nile, to meaſure and mark their lands; that when the water retired to its proper channel again, they might be able to diſtinguiſh each other's portions of land: this particular art was called *geometry*, which word is derived from two Greek words alſo, *gé*, the earth, and *metron*, a meaſurement; but it leads to the ſcience of geography, which in fact was only enlarging the idea, and applying it to the globe itſelf, upon more extended mathematical principles.

Of aſtronomy I would obſerve to my pupil, that it is derived from two Greek words, *aſter*, a ſtar, and *nomos*, a name; that this ſcience alſo originated with the Egyptians, and was improved by the Phœnicians, who made uſe of it for the purpoſes of navigation, as I have before obſerved.

I would

I would then inform him that aſtronomy is a mixed ſcience, compoſed of phyſics and mathematics; that the phyſical part treats of thoſe *laws* of matter and motion, which regulate the various appearances of the heavenly bodies; that the mathematical part determines the quantity of either matter, ſpace, or motion; ſuch as aſcertaining the magnitudes, diſtances, periods, eclipſes, and other particulars of the heavenly bodies.

He might then be told, that aſtronomy was diſtinguiſhed into *ſolar* or *terreſtrial*, according to the ſuppoſed ſituation of the ſpectator; and at the ſame time informed, that though the ſun and other heavenly bodies *appear* to move round the earth, it is the earth in fact which moves round the ſun, and that it, as well as the other planets, (which is derived from a Greek word, *planao*, ſignifying to wander, and are alſo called *erratics*, to diſtinguiſh them from the *fixed* ſtars,) have two motions, one round their own axis, and another round the ſun, in an orbit or circular courſe, appointed for them by the Creator at the beginning of time:—that the ſun, (however it appears to the contrary,) is ſtationary in the heavens, though it alſo has a motion round its own axis. I would then tell him how that was known, *viz.* by obſerving the varied poſitions of the ſpots ſeen on his diſk, at different periods

periods of the year, or ſpaces of time in which the earth moves round him.

I have been in the habit of obſerving to my pupils, that the reaſon why we are told in Scripture, that "*the ſun moves round the earth;*" that "*he rejoices as a giant to run his courſe,*" &c. &c. is, that Moſes and the other ſacred writers ſpoke of things as they *appeared* to be, and not as they really are; becauſe they were teaching religion and not aſtronomy, and addreſſing themſelves to an ignorant obſtinate people, who would have totally diſbelieved them, if any thing like doubt had attached to the doctrines they advanced; and that it is alſo a queſtion whether thoſe writers themſelves knew the real ſtate of the matter, as aſtronomy had not at that time been brought to that perfection to which it afterwards was.

I have alſo accuſtomed myſelf to illuſtrate the motion of the earth round its own axis, and the genial heat it receives from the ſun, by the common ſimile of a joint of meat revolving upon a ſpit before the fire, which I have found in general well enough calculated to explain that point, and diſprove the idea of the ſun's moving round the earth.

I would likewiſe make the pupil acquainted with the influence of the heavenly bodies on this globe; explaining to him that if the ſun, by its heat and genial qualities, can have ſuch a wonderful effect upon animals and vegetation,

as he muſt perceive it has, it is not to be wondered at if the moon has ſome influence likewiſe; from which I would take occaſion to obſerve to him, the effect it has by its attractive powers on the watery element, in cauſing a flux or reflux of the ſea, (called tides,) and raiſing or lowering the waters, according to its poſition with reſpect to the earth. I would alſo explain to him the phænomena of the trade-winds, currents, whirlpools, water-ſpouts, &c. &c.

The laws of gravitation and attraction, by which the heavenly bodies are kept within their proper ſpheres, ſhould alſo be fully explained to him, upon the Newtonian principle; the nature of comets, and the eclipſes of the ſun, moon, and other heavenly bodies, ſhould likewiſe be thoroughly impreſſed on his mind, and practical leſſons given him on the ſubject, by means of the globes and the orrery. It is not enough to tell a youth that things are ſo, but you muſt illuſtrate your obſervations by ſome kind of demonſtration, as near to the purpoſe and fact as poſſible, and ſo in every thing you teach him.

I would alſo make the pupil learn very correctly thoſe *chronological* principles which are indiſpenſably neceſſary in the ſtudy and practice of navigation, ſuch as the *cycles* of the ſun and moon, the golden number, the dominical letter, the epacts, the ſynodical month, the ſolar, lunar, and ſideral year, &c.

Thus

Thus far with reſpect to the maſter's teaching the ſea youth navigation.

The next point that requires particular attention, is the ſtudy of the French language, which, being the moſt generally ſpoken is the moſt likely of all others to enable the ſea youth, upon urgent occaſions, to explain himſelf to foreigners, with whom he may be under the neceſſity of converſing at ſea upon the meeting or taking of an enemy's ſhip, or in harbour abroad; and if to that the pupil can add a little knowledge of the Dutch and Italian languages, it will be as much as will ever be neceſſary for him, let him be ſtationed in whatever part of the world he may.

In Engliſh grammar, writing, and arithmetic, he ought to be made as perfect as poſſible, conſiſtent with the time and opportunities he may have, and the degrees of the previous progreſs he has made at ſchool.

Arithmetic, in particular, is indiſpenſably neceſſary to the practical ſtudy of geography, aſtronomy, and navigation; and of courſe, it ought to be a previous object of attention; or if it has not, ſhould be made every poſſible progreſs in, while learning the elemental parts of theſe ſciences.

Every thing that relates to the education of a ſea youth, is better taught by practice than by theory; but where the two can be united, it will

always prove of unſpeakable advantage to him; and if an able conſcientious maſter can be found, who will take the trouble to deſcend to firſt principles, and with ſimplicity of language, and perſpicuity of explanation at the ſame time, demonſtrate what he teaches or lectures upon in any particular ſcience, the improvement of the pupil muſt be conſiderably expedited and facilitated.

Preciſion and correctneſs ought to be particularly inculcated on ſea youth, in every thing they learn; for theſe ingredients will be eſſentially requiſite in their nautical calculations, and, if not ſtrictly attended to, will lead them into perpetual errors, and conſtant perplexity; to give them that habit, only requires the maſter's attention and regard to exactneſs at firſt, cuſtom will make it natural to them.

With reſpect to the choice of the books they ſhould take to ſea with them, that may be beſt determined by ſome friend who has been in the ſervice, and is converſant with the education of ſea youth: however, I will juſt mention, what I conceive to be the moſt eſſential and uſeful books; which are Hamilton Moore's Navigation, and Kelly's Nautical Aſtronomy: Turner's Syſtem of Geography and Aſtronomy, Guthrie's Geographical Grammar, with Euclid, the Preceptor, in 2 vols. by *Dodſley*, and a Gazetteer. A caſe of inſtruments is alſo neceſſary.

A good

A good Engliſh grammar, a Bible, and a few well ſelected amuſing authors in our own language; a French grammar, a Fable book, Telemachus, and Gil Blas, with a dictionary abbreviated, are as many as need be taken.

If I were to add one more book, it would be a dictionary of ſea terms and phraſes, in four languages; *viz.* Italian, French, Spaniſh, and Dutch, lately publiſhed by Neuman.

CHAPTER III.

The Rules and Obſervations applied to the ſeveral Branches of Education, to promote a right and correct Method of teaching them.

IN order to arrange the ſubject in the cleareſt manner poſſible, let us begin with the firſt thing the pupil is taught: *viz.* reading his own language, and trace his progreſs upwards through all the common branches of ſcholaſtic education, in the rotation in which they are generally introduced to his notice, as follows:

1. READING.
2. WRITING.
3. ARITHMETIC.
4. LATIN.
5. GREEK.
6. FRENCH.
7. MERCHANTS' ACCOMPTS.
8. GEOGRAPHY and ASTRONOMY.
9. HISTORY and CHRONOLOGY.
10. The MATHEMATICS and NAVIGATION.
11. RELIGION; or, the KNOWLEDGE and WORSHIP of the DEITY, founded upon the Study of the SCRIPTURES, and the Works of Nature.

SECT.

SECT. I.

Of Reading.

As I have before obſerved in another part of this work, young and tender minds are to be gently attracted, and as it were *cheated*, into learning, without their perceiving it themſelves, or being obliged from harſh treatment, to conſider it as a taſk or a duty impoſed upon them: it ſhould never be made a *buſineſs* of, but an *amuſement*, till their bodies and minds have gained ſufficient ſtrength, to bear compulſion and reſtraint without injury to their tender frames and faculties, and till they have acquired reaſon enough to underſtand when they are told, that the taſks impoſed upon them, and the neceſſary reſtraints and labours of education, are for their future good in life, and deſtined to rear them into accompliſhed MEN and WOMEN: this idea is always pleaſing to children; it is conſtantly uppermoſt in their thoughts, and therefore might be made the chief inſtrument in winning them to learning.

Children naturally love liberty from their cradles, and therefore have an averſion to many things, merely becauſe they are enjoined them: to this circumſtance parents and teachers ſhould

particularly attend, and act accordingly with them.

To the young, fear, terror, and compulſion, are always deſtructive and injurious: deſtructive to the nerves and frame of the body, injurious to the underſtanding, and the faculties of the mind.

If by a ſudden ſurpriſe or ſight of terror, the life of a grown perſon has been loſt, or the mind has been *for ever* deranged, is it not obvious that inferior degrees of fear and terror, will operate in equally deſtructive proportions on the more tender frames of children?

Let us therefore lay aſide the arts of terror and kindly win our pupils to our purpoſes: let us not frighten, but encourage them.

There is no doubt but children in general may be brought to wiſh, and aſk it as a favour to read, if it is talked of in their hearing as a matter of honour, credit, and amuſement, or propoſed to them as a reward for doing ſomething elſe well, and if they are never chid or corrected for the neglect of it.

Parents might now and then take an opportunity of obſerving in converſation, without ſeeming to intend their children to hear them, that it is particularly the privilege and advantage of elder brothers and ſiſters to be ſcholars; that this makes them fine gentlemen and ladies,

and

and beloved by every body; and that it is quite a favour to let younger brothers and ſiſters, or indeed any little boys and girls, learn to read and write.

It appears to me that ſome ſuch methods as theſe would have the wiſhed-for effect on children when other means fail, and that when their tempers and diſpoſitions are thoroughly diſcovered, thoughts might be put into their heads that would make them, of their own accord, wiſh and aſk to *learn*, and induce them to think it an amuſement ſo to do.

Children ſhould not have any thing like work or of a ſerious nature impoſed upon them, for neither their minds nor their bodies can bear it. It injures their health; and their being forced and tied down to their books in an age at enmity with all ſuch reſtraint, has no doubt been the reaſon why a great many have hated books and learning all their lives after; it is like a ſurfeit, that leaves a loathing or averſion behind it not to be removed.

Among the *Portugueſe* it is ſo much a faſhion and emulation among their children to learn to read and write, that they cannot keep them from it; they will learn it from one another, and are as intent upon it as if it were forbidden them: and in ſome parts of France, children teach one another to ſing and dance from the cradle.

It

It is better for a child to be a year later *before he can read*, than that compulſion and correction ſhould beget in him a premature averſion to learning. If you have any conteſts with your pupil, let it be in matters of moment, but lay no taſk upon him about A, B, C. Uſe your ſkill to make his diſpoſition pliant to reaſon; teach him to love credit, honor, and commendation; to abhor being thought ill or meanly of; but do not ſhackle and confine him to rules in matters of indifference, nor reprove him for every little fault, or even ſome that to others might appear great ones.

If any of the above obſervations can be applicable to a right mode of education and the proper treatment of children, it is at the period of their beginning to learn to read, that they muſt be of the moſt uſe, and be followed with the greateſt effect.

Not to dwell long on the ſubject of the young pupil being made acquainted with the *letters* or *characters* of the alphabet, I ſhall juſt point out two or three methods of teaching him readily to know and diſtinguiſh them from each other; but it may be proper firſt to ſtate, from whence theſe characters, called by us letters, derive their origin.

MEMNON the Egyptian, is by ſome ſuppoſed to have invented letters in the year 1822 before CHRIST, from whom the Phenicians received them,

them, and were carried by CADMUS into Greece (where he built the city of *Thebes*) in the year 1493 before CHRIST.

They were adopted by the Phenicians, in order, by a proper combination of them, to convey their ideas to one another. The Greeks took theirs from the Phenicians; the Romans or Latins faſhioned theirs from the Greeks; and we framed ours after the model of the Roman characters. The old Engliſh letters were, I believe, formed from the Saxon characters, which more cloſely followed the Phenician and Greek than the Roman. This is a curious enquiry that is not unworthy the young teacher's attention and inveſtigation.

To teach children in an attractive way to know and diſtinguiſh theſe letters readily, playthings might be contrived and fitted for the purpoſe, by which means they might be taught to *read*, whilſt they thought they were only *playing*.

1. The letters of the alphabet, conſiſting of two ſets, the one capitals and the other ſmall, might be printed or cut out on counters or round bits of wood, about the ſize of a ſhilling, and covered with black or red ink. Tell your pupil to ſelect and bring to you great A or little B, and ſo on of any other letter: tell him it is a pretty play, and that if he is a good boy you will

will now and then play with him at it; but care muſt be taken not to repeat it too often, or to weary him of it; for of play even, children grow tired when it is too much prolonged: the "*ne quid nimis*," or, "not too much of any thing," may be very properly applied here.

2. An ivory ball might be made with thirty-two ſides, or one rather of twenty-four, or twenty-five ſides; and upon ſeveral of theſe ſides an A might be paſted on; upon ſeveral others B; on others C; and D on the reſt.

You might begin with only theſe four letters, or perhaps only two at firſt; and when the child is perfect in them, then add another; and ſo on till each ſide having one letter, the whole alphabet is arranged upon it.

This ſhould be played with before the infant pupil by other children older than himſelf, or by his parents; it being as good a kind of amuſement to lay a wager, who upon this inſtrument ſhall firſt throw an A or a B, as who upon dice ſhall throw ſix or ſeven.

This is ſuppoſed only to be a play among yourſelves, and the pupil muſt not be aſked or tempted to join you, leſt you make a buſineſs of it to him: the wiſh to play at it muſt come from himſelf, and he muſt not be permitted to underſtand that it is any thing but an amuſement practiſed by elder people; there is no doubt

doubt but he would then take to it of himſelf, and hanker after it: and that he may have the more reaſon to think it is merely a play that he is ſometimes as a favour indulged in, when the game is over, the ball ſhould be laid ſafe up out of his reach; that ſo it may not, by his having it at any time in his own keeping, grow ſtale to him.

To keep up his eagerneſs for it, let him think it a game intended for thoſe above him; and when by this means he knows the letters, and can readily diſtinguiſh them; by changing them into ſyllables, he may *learn to read*, without knowing how he did ſo, and never have any cenſure or trouble about it, nor fall out with his books becauſe of the harſh treatment and vexation they have occaſioned him.

Children, if you narrowly obſerve them, take very great pains to learn ſeveral games, which if enjoined them to learn, they would abhor as a buſineſs and a taſk.

3. The ſix vowels may be paſted on the ſix ſides of a die, and the eighteen conſonants on the ſides of three other dice, and he who at one caſt, throws moſt words on theſe four dice, is the winner; and ſome ſtake or bet ſhould be ſet before the juvenile players. In this way children may play themſelves into ſpelling with great

great eagerneſs, and without once having been chidden for it, or forced to it. I think this plan ſo eaſy and uſeful, that it will be hard to find any better, and there will hardly be need of any other.

It is obvious to every grown perſon, that children will take immenſe pains to be expert at ſome particular play: and it may have occured to them as well as to myſelf while looking on, that it only wanted ſome good contrivance to make them employ all that induſtry, about ſomething that might be more uſeful to them; and there is reaſon to think that it is only the fault and negligence of elder people that it is not ſo. Children are much leſs apt to be idle, than men; and men are to be blamed if ſome part of that buſy humour be not turned or directed to uſeful things, which might in general be made as delightful to them, as thoſe they are employed in, if parents or teachers would but be half ſo forward to lead the way, as theſe little apes would be to follow.

It is probable that ſome diſcerning native of *Portugal*, introduced many of the amuſing games which are in uſe with us, among the children of his country, where, as has been before obſerved, it is impoſſible to *hinder* them from learning to read or write.

It will be eaſily perceived by thoſe who have been in the habits of reading treatiſes on education,

tion, that many of the foregoing remarks are founded upon obſervations of the great Mr. Locke, in his ſmall, though valuable publication on that ſubject. I have introduced them here, becauſe they may be of eſſential ſervice to ſome parents and teachers; but at the ſame time I muſt obſerve, that in the preſent day they cannot have ſo much weight as at the period he wrote; becauſe the art of education or teaching is more matured and improved, and probably the genius of children more apt and forward than it was a century ago: and as theſe obſervations merely apply to the firſt principles of reading (indeed the whole work conſiſts only of hints towards a more enlarged plan of education, though in ſome caſes he has gone beyond the initiatory part) it cannot be conceived that they will much affect the ſubſequent obſervations I have to make on the reading and ſtudy of the Engliſh language; though, at the ſame time, they may, in ſome degree, be influenced by the principles that guided that great man in his ſhort but able ſketch.

To follow the path he has pointed out would be no diſgrace to any author; but as his work did not fall into my hands, till after the plan of this was formed and conſiderably advanced, I am not afraid that the uſe I have made of his hints will ſubject me to the charge of plagiariſm;

riſm; or if it ſhould, I will chearfully put up with the ſcandal, in conſideration of the benefit that parents and young teachers, who have never had an opportunity of reading him, will derive from the quotations I have intervoven with my own obſervations. It is rather difficult, I believe, as a very ſenſible and reſpectable Quaker lately obſerved to me, to write upon education without falling into the ſame tract that others have done, and ſelecting from their works; how far in writing upon the Art of Teaching, I may be liable to be forced into the common tract or ſtream, for want of *originality* and *novelty*, remains for the candid reader to determine.

Beſides the above mentioned methods of teaching children to know their letters and to read, twenty other plays might be invented (ſays Locke), which thoſe who like this way may eaſily contrive, and get made for the purpoſe if they pleaſe.

I hope I may be permitted here to remark, that this mode of teaching is very well for thoſe who have the means of purchaſing ſuch attractive *play-things*, and who have compleat leiſure and inclination to effect it in that way; but the poor ſervant or labourer, the induſtrious mechanic, and the buſy tradeſman, cannot teach their children upon ſuch a plan: to them the horn-book, primer,

primer, or ſpelling-book, is the only ready reſort, and the child muſt be kindly led on in the uſual old-faſhioned way, to learn his letters by book; but if it could be done by the former means, it would perhaps be the ſhorteſt and ſureſt method.

In large ſchools the plan could not be well adopted, though I ſhould hope that in the new deſcription of ſchools called PREPARATORY, this method is not overlooked. In them I think it would be feaſible and uſeful.

Private tutors and governeſſes in affluent families, or the parents themſelves, may practiſe it with much advantage and effect. In public ſeminaries for the more advanced pupils, it cannot be attended to as it ought for many reaſons, and on this account preparatory ſchools muſt prove of infinite advantage. It may be anſwered that very few children are ſent to large ſchools, till they *do* know their letters; but I have ſeen many inſtances of the contrary being the caſe.

Let the child, however, acquire the letters by the readieſt means in the parent's or teacher's power; it is of no conſequence *how* it is compaſſed, if it is correctly done: the above hints are only intended to aſſiſt, not to dictate the means or plan; and if approved, NEWBERY, of St. Paul's Church-Yard, can furniſh them with variety of ſuch attractive play-things.

The next ſtep, *viz.* learning to SPELL, becomes a ſerious one, and the more ſo, as it is the very ground-work of reading, and the firſt principle or baſis of all languages. Here the parent's affectionate earneſtneſs of exertion, and the teacher's conſcientious attention to correctneſs and exactneſs will be greatly required and tried.

Teacher! If you wiſh your pupil to acquire an early and mechanical habit of punctuality and correctneſs, in *every thing* he is afterwards to learn under your direction, it muſt take its riſe and date from the hour he begins to learn to *ſpell:* for the good or bad habits acquired in the firſt ſtage of his progreſs in any branch, will moſt aſſuredly be carried on with him into the other ſtages, and conveyed from one branch to another with an almoſt unchangeable and unalterable effect. The right ſtudy of every individual branch of education depends more or leſs upon the correct acquirement of the reſt. They all run into one another by ſuch fine connection and gentle gradations, that if a pupil is perfect and exact in the ſtudy and practice of one, he will hardly be careleſs and incorrect in learning another: they mutually aſſiſt each other, and as I have obſerved in another part of this work, one branch (ſpeaking of writing bad exerciſes, or rather ſcribbling them) ſhould never be ſacrificed to the attainment of another, but the

ſame

ſame care, the ſame attention and correctneſs in all he does, ſhould be inculcated upon the young pupil.

Hence the neceſſity of ſcrupulous exactneſs in teaching ſpelling and reading, and giving the child habits of correctneſs in the outſet of his education; for depend upon it, good or bad, he will not very eaſily ſhake off thoſe firſt habits.

If you teach him but *three* words in a day, let that be perfectly done. Your conſcientious attention to exactneſs, can alone enſure the certainty of his progreſſive improvement.

While he is ſpelling let not your attention be taken off for a moment, nor ſuffer a ſingle error to eſcape your notice: continue this correctneſs for a time, and he will hardly be able to ſpell a ſyllable wrong, if he wiſhed to do it; ſo great is the *power of habit!* This attention to correctneſs at firſt, will ſave you at leaſt half the trouble you would otherwiſe have in teaching him what is to follow.

The EAR or power of catching and tranſmitting ſounds through the medium of the voice, differs very much in children: for ſome will very aptly and readily hit the proper ſound of a ſyllable or word, and tranſmit it correctly, while others cannot take it at all, and of courſe cannot tranſmit it to the teacher. Some children have alſo a defect in the tongue, palate, &c. which occaſions a difficulty of utterance and

tranſmitting ſounds with exactneſs. On this particular point I have made ſome obſervations under the head of the French Language, which I flatter myſelf will be found of uſe. Here I ſhall only add, that a *bad* ear may be improved by attention in the teacher, and practice in the pupil; referring the reader to that *ſection* of the work, for further particulars reſpecting the cauſes and cure of this deficiency.

I will now ſuppoſe the pupil at a public ſchool, and taking his chance with other children, under whatever teacher may happen to fall to his lot. To that teacher I now addreſs myſelf.

In learning SPELLING, the following particulars are to be attended to:

1. Correctly naming the letters of the ſyllable.

2. Sounding the ſyllable properly or muſically.

3. Dividing the ſyllables in a word with exactneſs, and attention to quantity and length.

4. Spelling on the book till, by much practice, the pupil is mechanically perfect in the ſounds.

5. Spelling without the book, till, by practice, he can

6. Correct falſe ſpelling in written exerciſes, ſuch as *Linley Murray's*, or any other leſſons of that

that kind the teacher may think fit to give him as ſoon as he can write.

When, by a good deal of practice in ſpelling, your pupil is capable of attempting to read, before he begins his leſſon, always examine and rectify the attitude and poſture of his body: let him ſtand upright, firm and ſteady, with his head erect, his feet properly turned out, and his arms in a proper poſture: (female teachers of courſe make this an eſſential point with pupils of their own ſex, or at leaſt they ought to do it) ſuffer him not to wriggle about with his feet, ſhake his knees, play with his buttons or fingers, put his hands in or out of his pockets, or move his body to and fro in a balancing kind of uniſon with his voice: let him not ſhake his head at every word he may happen to miſcal, or heſitate and ſtumble at.

Place him at the diſtance of two yards from you, more or leſs, according to the ſtrength of his voice and ability to read, without your being obliged to point to the words; then he will find that he is not underſtood, except he expreſſes himſelf with a clear articulation, and ſpeaks out *manfully*; which ſhould always be encouraged as much as poſſible, but not extended to too great an exertion, or too loud a tone of the voice; in caſes of ſtuttering, thickneſs of ſpeech,

or difficulty of utterance, the teacher muſt reſort to remedies, as DEMOSTHENES did.

For many reaſons a teacher ſhould never look over a child's ſhoulder while reading, but always make him ſtand at a certain diſtance, according to his age, ſtrength of voice, and other circumſtances.

In reading, the avoiding all improper attitudes, tones and geſtures, eſpecially thoſe convulſive involuntary motions of the head, hands and feet, to which children of weak nerves and conſtitutions are very liable, and females in particular, are to be carefully attended to and corrected by rhe teacher.

His buſineſs is not merely to inſtruct and cultivate the mind, but to connect with it the graces of bodily attitude, geſture, and propriety of action.

Theſe accompliſhments muſt, however, be preceded by the attainment of a ſimple and correct ſtyle of reading. A child cannot be ſuppoſed or expected to feel all he reads at firſt, *in merely learning to read*, though he may comprehend it; and indeed thoſe little books which are uſed in the early ſtages of his progreſs, do not require action or geſture, but his attitude muſt nevertheleſs be attended to. It is as he advances to read on ſubjects of an intereſting nature and importance, which require varied expreſſion

preſſion in the voice, countenance, and body, that action muſt be gradually taught him.

The firſt ſtage in reading conſiſts in proper articulation, correctneſs in reading the words, and attention to the ſeveral ſtops or pauſes, called points. Till theſe, by practice, are perfectly attained, it is in vain to go further, even if the pupil's advanced age, and feeling what he reads, ſhould naturally lead him into the *attempt* at action and variation of tone.

To illuſtrate my meaning, I preſume a teacher would not ſuffer a boy to read a chapter in the Bible, or one of Eſop's Fables, in the ſame ſtyle of action and variation of voice, that he would HANNIBAL's Addreſs to his Soldiers, or CATO's Soliloquy. It is only when boys have learnt to read with compleat accuracy and exactneſs, and with the requiſite attention to ſtops or pauſes, cadences, and ſo forth, that ſuch attempts would be permitted, and then only as an indulgence and by way of treat; for as with the infant learning his letters, incitements of this nature may always be uſed with effect, as a ſtimulus to emulation and diligence, if they are not made too common and cheap.

As in ſpelling, ſo alſo in READING (and more particularly ſo indeed on account of the pupil's advancing age) a ſingle error ſhould never be permitted to paſs un-checked and un-rectified, whether in articulating, in reading the words

themſelves, or in the points or ſtops; the length and duration of which ſhould be carefully explained to him, as well as the marks of interrogation, admiration, &c.

Some children will read on through ſtops and pauſes, and even join one paragraph to another, with great earneſtneſs and volubility; but in ſuch caſes the teacher ſhould immediately arreſt their progreſs, and to make ſhort of the matter, begin again where they ſet out, and go over it repeatedly till they have done it correctly: a few repetitions of that labour, will induce them to read properly, if advice and admonition fail.

The child's attention muſt be ſecured and kept up as much as poſſible, and ſubordination to maſters and teachers ſhould always be ſtrongly inculcated by the parents previous to, and after his being ſent to ſchool: *there* the maſter himſelf muſt enforce and keep it up, in order to *facilitate* the duties of his aſſiſtants. *Learning* will never be properly conducted in ſchools, till this exact ſubordination is maintained, and it *muſt originate* in the previous admonitions and commands of the PARENTS, who ought, from the tendereſt age, to inſtruct their children to look up with reverence and reſpect to their teachers. If this be made an early object of, and maſters treat their aſſiſtants like gentlemen, (who in their turn muſt however conduct themſelves ſo as to deſerve it,) there would ſoon be a viſible

a viſible improvement in the management of academies, by facilitating the means of inſtruction, and eaſing both maſter and teacher of one half their labour and trouble. It is the want of ſubordination and method that ſpoils all in ſchools. If your aſſiſtants are good and reſpectable men, they claim your warmeſt ſupport; if they are bad or unqualified, diſcharge them; but never ſacrifice the authority and comfort of the teacher to the wayward diſpoſition of the pupil, or the caprice of the parents.

SECT. II.

With reſpect to the choice of the books adapted to the ſeveral ſtages of the Engliſh pupil's progreſs, a parent or teacher can be at no great loſs, in a period abounding with numerous and uſeful publications, of every deſcription, intended for the juvenile part of the community. One thing, however, I beg leave to remark, and that is, the leſs the little works you ſelect have the ſpirit of *romance* in them, and the more of the ſimplicity of nature, truth, and philoſophy, the better. I have myſelf ſeen and felt ſo much of the bad conſequences of an early acquaintance with that intoxicating, reaſon-perverting, and effeminating poiſon of the

the mind, termed Novels, that I could wiſh to diſcourage the reading them in any ſtage of education whatever, or indeed at any period of life: but that is only my own private notion of them; I may be wrong.

In the firſt ſtage of READING, any of the following publications, to be had at Newbery's, may be uſed. With reſpect to the BIBLE being made the ſubject of exerciſe in reading, I have given my reaſons in a former part of the work, why I think it unſuitable and improper for children.

The Ladder to Learning Youthful Recreations; or, the Amuſements of a Day Fables of the Wiſe Eſop The New Robinſon Cruſoe Inſtructive Leſſons, in Tale and Dialogue The Infant's Friend; or a Spelling Book, by Mrs. Lovechild Winlove's Collection of Stories.	6d. each.
The Polite Academy Moral Sketches for Young Minds The Bible in Miniature Leſſons in Reading, by Mrs. Lovechild	1s. each.
Cooper's Hiſtory of England Juvenile Tales The New Children's Friend The Happy Family at Eaſſon Houſe	1s. 6d. each.

Gay's

Gay's Fables Choice Emblems for the Improvement of Youth	2s. each.

In this ſtage, which may in general be reckoned from five to eight years of age, ſimplicity and correctneſs of manner in reading, with attention to the pauſes and tones of the voice, is all that the teacher need aim at: the habits of exactneſs the pupil acquires in this ſtage, will grow upon him as he advances in his progreſs through the reſt.

In the ſecond ſtage, which we may reckon from eight to eleven years of age, the following ſelection of books may be uſed:

The Economy of Human Life The Adventures of Gil Blas, abridged A New Spelling Dictionary Davis's Introduction to Engliſh Grammar Moral Sketches for Young Minds	1s. each.
The Hiſtory of Prince Le Boo Geography for Children Newtonian Syſtem of Philoſophy, by Tom Teleſcope Paths of Virtue exemplified in the Lives of eminent Men and Women Cooper's New Roman Hiſtory	1s. 6d. each.

Mrs.

Mrs. Trimmer's Fabulous Hiſtories	2s. each.	
——— Knowledge of Nature		
A Deſcription of London, in 2 pocket volumes		
Dodſley's Chronicle of the Kings of England		
Juvenile Speaker		
The Hiſtory of Sandford and Merton		
Biography for Boys and Girls, ſeparate		
Barbauld's Leſſons for Children, in four Parts		
	s.	d.
Mrs. Pilkington's Scripture Hiſtories	1	6
Croxall's Eſop's Fables —	3	0
Deſcription of 300 Animals	3	0

Goldſmith's Hiſtory of England	3s. 6d. each.	
The Hiſtory of the Bible, with cuts		
The Beauties of St. Pierre's Studies of Nature		
Dr. Dodd's Beauties of Hiſtory		
Adams's Flowers of Modern Hiſtory		
——— Ancient Hiſtory		
	s.	d.
Adams's Modern Travels, 3 vol.	12	0
Natural Hiſtory of Birds, 2 vol.	8	0

In reading the above deſcription of books, the pupil will begin to feel, and naturally and ſpon-

ſpontaneouſly connect action and variation of voice with what he reads. This riſing tendency to elocution and declamation the teacher muſt carefully cheriſh and encourage; but at the ſame time not ſacrifice correctneſs and accuracy to it. It is very probable that at this period, as well as in the firſt ſtage, he will meet with pupils who have either a droniſh, drawling manner of reading, or prolonging the voice in ſounding ſyllables and words, or a quick, incomplete, and haſty way of running through them, as a drunken man does when he is vulgarly ſaid to "clip the king's Engliſh;" either of theſe are bad enough, but when he adds to them the ſame fault with reſpect to the points or ſtops, it is doubly bad, and muſt be carefully corrected by the teacher, by reading the ſentence or paragraph to him as it ſhould be done, and making him repeat it in the ſame ſtyle.

In the third and laſt ſtage, from eleven to fourteen years of age, a few of the following publications may be ſelected, at the diſcretion of the parent or teacher, ſome regard being paid in the choice to the pupil's own wiſh:

	s.	d.
Enfield's Speaker —	3	6
——— Exerciſes on Elocution	3	6
Wolſtonecraft's Original Stories	2	6
Dr. Johnſon's Lives of the Poets, abridged	4	0
Telemachus, by Fenelon —	3	6

The

The Rudiments of Reaſon; or, Young Experimental Philoſopher, 3 vols. each 4 6
Wolſtonecraft's Elements of Morality, 3 vol. — — 10 6
Dramatic Dialogues, 2 vol. each 5 0
Mitchell's Moral and Inſtructive Tales, 2 vols. —— each 6 0
Inſtructive Rambles in London and the Adjacent Villages, 2 vol. each 6 0
Sheridan and Henderſon on Reading and Reciting Engliſh Poetry 3 6
Sheridan and Walker's Pronouncing Dictionary —— — 3 6
Allen's Hiſtory of England 4 0
Aikins's Natural Hiſtory of the Year 3 0
Sturm's Reflections on the Works of Providence, 3 vol. —— 12 0
Beauties of Hiſtory, by Stretch 3 6
Beauties of Johnſon — 4 0
——— of Shakeſpeare — 4 0
——— of Sterne — 4 0
Berquin's Friend of Youth, 2 vol. 6 0
Elegant Extracts in Proſe, Epitome 3 6
Elegant Extracts in Verſe, do. 3 6
Gregory's Legacy, with fine plates 6 0
The Preceptor, in 2 vol. — 12 0
Murray's Engliſh Reader — 3 6
——— Grammar — 3 0
——— Key — — 2 0
——— Exerciſes — 2 0

Newbery

Newbery has a Liſt of Books fit for young people of both ſexes, in the three ſtages of their progreſs, which may be had *gratis* at his ſhop.

The particular ſpecies of works in proſe which I would recommend to the choice and attention of grown young people, are Addiſon's, Locke's, and Dr. Johnſon's; Hume's and Smollett's Hiſtory of England; Gibbon's Riſe, Decline, and Fall of the Roman Empire; Dr. Robertſon's Hiſtory of America, and of Charles V. of Spain; Cooke's and other's Voyages; the Spectator, Guardian, Tatler, and Rambler, or rather the Britiſh Claſſicks, in eight volumes, publiſhed by Harriſon, which contain theſe four laſt unrivalled works, and many more of great claſſical elegance: for it muſt be carefully obſerved, that the more elegant, claſſical, and well written the works are which young people ſelect, the more refined will their taſte and ſtyle become.

By this time the pupil ſhould of courſe have acquired a good notion of *grammar*, eſpecially if he has been initiated in the Latin grammar, and the eaſy authors in that language; and it is to this point that I ſhall now confine myſelf: for I am not to ſuppoſe the teacher or parent at any loſs to inſtruct him in the firſt principles of the Engliſh language, my previous obſervations being only intended as hints and remarks

marks which they muſt improve upon according to circumſtances, as the age, health, diſpoſition, the natural and acquired abilities, opportunities, &c. of the pupil, may direct them. All that I have to ſay further is generally this; that conſcientious preciſion in correcting their errors in the reading the words, in the articulation of them, and with reſpect to the points, is all that they have to attend to.

I often mention the word *conſcientious*, but I am ſure it will be a ſufficient apology for it to ſay, that this virtue is abſolutely and indiſpenſably neceſſary to form a good teacher; I have, myſelf, from habit and the proper feeling of its importance, been always ſacredly ſo in what reſpects the duties of teaching, and the reverence due to the young: I believe I may with ſafety appeal for the truth of this aſſertion to at leaſt a hundred former pupils, valuable characters, in this metropolis. To them, and my friends in general, I hope this work will be ſome kind of proof that my mind is not ſo indolently inclined, nor my moderate talents always ſo miſapplied, as they may have haſtily imagined.

This digreſſion is the more neceſſary, as it is a juſtice I owe to myſelf, and as, from the failings of *late* experience, I have had the miſfortune to create enemies and loſe valuable friends.

It

It has, however, had the good effect of turning my mind to useful and profitable researches, and rendering my lonely situation more amusing and eventually pleasant to myself, than all the enjoyments I could have derived from the most brilliant society, or the most extensive and respectable acquaintance. I sometimes envy a Nelson, a St. Vincent, and a Pitt, but I never envy the idle rich, the titled noble, or the luxurious citizen. Age and experience have given me quite another taste, and the remainder of my life will be devoted to useful labour, and earnest endeavours to guard the young against the errors, that by hard experience, I have found to militate against my own rise and happiness in life. If this Work should be well received, I have another in contemplation equally useful, as it respects the young and rising generation. I have seen much of the world, and have mixed in every variety of company, from the *peer* to the *mechanic*; have been much employed in public and mercantile business; and, at the commencement of the French Revolution, was acting secretary and interpreter to a gentleman then high in office, employed to negociate a matter of great public importance with the NATIONAL ASSEMBLY of *France*; with the leading members of which, I had daily conferences on the part of my principal, and was admitted to their tables and society. In short I was then in

the road to not unmerited preferment, and was a witneſs of the early progreſs of the Revolution; but the crooked politicks of the heads of the office to which I belonged, loſt me my *ſeven* years hard earned proſpects, and by being obliged to take part in them or quit the ſituation I held, I choſe the latter; and endeavouring to do it with ſome fair advantage to myſelf, I unintentionally injured a deſerving individual, and innocently fixed upon myſelf a ſtigma that I never imagined I could be juſtly loaded with; that individual, however, I lately ſaw after a ſeven years abſence, was received with cordiality by him, and he is a ſubſcriber to this Work.

SECT. III.

Of the Engliſh Grammar.

In teaching the Grammar of the Engliſh language, the ſhorter and ſimpler the rules are laid down, and the more comprehenſive the application of them, the better.

Linley Murray's Grammar, price 3s. is the beſt calculated to anſwer that purpoſe of any I have yet ſeen. He has alſo publiſhed a *Key* to it (price 2s.), which both teacher and pupil will find extremely uſeful. His Falſe Exerciſes (price 2s.) for the pupil to render into good grammar, ought alſo to accompany the other two publications:

cations: I ſhould alſo obſerve, that in this latter work he introduces falſe ſpelling to be rectified by the pupil, for his improvement.

There are other very good grammars extant, ſuch as Dr. Lowth's, Mr. Fiſher's, Story's, Mrs. Devis's, &c.; but I believe Mr. Murray's is now generally conſidered as the beſt for young people, as being a choice collection from the beſt writers on that ſubject.

In order, however, to do *my* part, I ſhall give my readers a ſhort view of the Engliſh grammar; and the better to aſſiſt the teacher's ideas, I ſhall arrange it in the ſame method, and deliver it in the ſame terms as nearly as poſſible, that I have lately been in the habit of doing twice a week, by way of a general lecture on the ſubject, to a large claſs of boys from ſeven to twelve years of age; upon whoſe minds I made it a point, by frequent repetition, to impreſs the elements and principal outlines of it, previous to their entering more deeply into the ſubject in *Linley Murray*, or any other author of that deſcription.

GRAMMAR is the art of ſpeaking or writing any language with correctneſs and propriety: it is divided into four parts; *viz.* Orthography, Etymology, Syntax, and Proſody. Theſe terms the teacher muſt explain more in detail to the pupils.

The letters or characters of the alphabet, which were firſt invented by the Phenicians, in order, by a proper combination of them, to expreſs their ideas to each other in ſpeaking or writing, are ſounds of the human voice, variouſly formed by the tongue or organ of ſpeech, and are twenty-ſix in number; ſix of which, *a*, *e*, *i*, *o*, *u*, and ſometimes *w* and *y* are vowels, and the reſt are called conſonants, from a Latin word *conſonare*, to ſound together, becauſe a conſonant always requires the aſſiſtance of a vowel to ſound it; as for inſtance, the conſonant *d* requires the vowel *e* to compleat its ſound. A vowel makes a full and perfect ſound of itſelf, not requiring any other letter to aſſiſt it. Dipthongs are two vowels meeting together, and forming one joint and indiviſible ſound. There are alſo Tripthongs or three vowels meeting together.

I mentioned the Phenicians communicating their ideas to each other in writing; but you will obſerve that paper was not then invented, and that they wrote on the thin bark, or large broad leaves of trees.

Two or three of theſe letters or characters being joined together make a ſyllable, and one, two, three, or more ſyllables, make a word; words make ſentences, or a compleat ſenſe, and ſentences form paragraphs, and ſo forth.

Words which are the baſis of a language are divided into nine claſſes in the Engliſh language,

guage, called PARTS OF SPEECH; and giving the name of the particular claſs to which each of theſe words belong, is called *parſing*. The Latin language has only eight parts of ſpeech, becauſe we add one more to theirs, called the *article*. Other languages differ alſo, but not much, in the number of claſſes or parts of ſpeech into which they divide their words, as you will hereafter know when you come to learn thoſe languages.

The nine Engliſh claſſes are as follow:

Article, *a, an, the.*
Noun, *man, beaſt, ſoul.*
Pronoun, *I, you, that, which.*
Adjective, *good, bad, white.*
Verb, *did, loved, walked.*
Adverb, *where, when.*
Prepoſition, *by, to, in.*
Conjunction, *and, though, yet.*
Interjection, *ah! alas! woe's me!*

I ſhall now deſcribe the nature and uſe of theſe ſeveral claſſes in the order in which they ſtand, requeſting your particular attention to, and recollection of, what I have to ſay.

N. B. It is in this way a teacher ſhould draw and command the attention of his pupils.

To treat the ſubject once or twice a week in this *vivâ voce* kind of way, and now and then call upon ſome particular one to repeat what he has juſt been obſerving, is the beſt method

I have found of impreſſing any thing I wiſhed on their minds; far preferable to their reading or getting it by heart; and the more change and novelty of expreſſion and obſervation the teacher can introduce, the greater will be their attention, and the more certain their recollection; becauſe it is out of the uſual hum-drum routine of grammar buſineſs.

1. The ARTICLES are two in number, and ſerve to determine or fix the meaning or ſenſe of nouns, and to apply them to particular perſons and things; one is definite, *the*; and the other indefinite, *a*; but when a vowel begins a word, *a* is changed into *an*; we do not ſay *a* aſs, *a* ape, but *an* aſs, *an* ape; ſometimes the *h* has the ſame privilege as a vowel, that is, when it is not ſtrongly aſpirated, as *an* hour. *Definite* means the exact, decided, or very perſon or thing, as *the* man I ſpoke of: *indefinite* is the contrary, leaves you in doubt which, and is *general* in its application, as a horſe, a man, a tree: you perceive this does not mention any particular horſe, man, or tree, as the definite article does.

2. The NOUN, or Subſtantive, as the Latin word *nomen*, from which it is derived, fully explains it, is the name of every thing that is an object of the ſenſes or the underſtanding, or that you can ſee, feel, taſte, hear, or underſtand;

ſtand; as a *man*, a *tree*, an *apple*; theſe three have ſubſtance; you can ſee a man, you can feel a tree, and you can eat an apple; but wit, learning, ſpirit, honor, goodneſs, virtue, you cannot ſee, except in their effects, becauſe they are not ſolid matter or bodies; you can only ſee them in idea with the eye of the mind, or by thought; but yet they are nouns, becauſe they are the names of qualities, and powers of the mind.

The names of men and women, countries, towns, rivers, mountains, fruits, trees, animals, &c. are nouns; and as all nouns ought, ſhould always be begun with a capital letter in writing; the ſame of all the arts and ſciences, and many other matters.

Therefore it follows, that in a ſentence every word which is the name of any ſubſtance, quality, and virtue or vice of the mind, is a noun; as for inſtance, this horſe does not go faſt: *horſe* is the only word there that is the name of a ſubſtance you can ſee, and is of courſe the noun.

His virtue and genius were great; *virtue* and *genius* being powers of the mind, though not viſible, except in their effects, are nouns.

Wickedneſs, anger, hatred, and hypocriſy, had place in his heart. Here the words *wickedneſs*, *anger*, *hatred*, *hypocriſy*, and *heart*, are nouns; ſo is the word *place*: the word *heart*, for two reaſons, is a noun, becauſe it may be taken

either in a material or a ſpiritual ſenſe; for it is a ſubſtance in the body, and is alſo ſynonimous to, or of the ſame meaning with, the mind which is of a ſpiritual nature.

The noun is declined or varied in its circumſtances or caſes, which are ſix in number in the Latin, but only two properly in Engliſh nouns, by the prepoſitions *of*, *to*, *with*, *from*, *in*, or *by*, and has two numbers, ſingular and plural. The *ſingular* ſpeaks of one perſon or thing, the *plural* of two or more: the Greeks add another, termed the *dual*, in which two only are ſpoken of, from the word *duo*, two.

The Engliſh language has no *ſigns* of the difference of gender, as the Latin has; but we term the male of every animal *maſculine*, the female *feminine*, and things without life we call *neuter*, or neither of the two, though by a figure of ſpeech they are ſometimes converted into the maſculine and feminine genders, as when we ſay of the ſun, *he* is ſetting, and of a ſhip, *ſhe* ſails well.

The genitive is the only caſe in which the Engliſh noun itſelf varies its termination in the ſingular; as, inſtead of ſaying the book of that boy, or that boy *his* book, we ſay that *boy*'s book, adding, as you perceive, an *s*, with an apoſtrophe for the ſign of the genitive, and ſignifying property or poſſeſſion. Nouns vary in the plural from the ſingular in their termination.

Example

Example of the Declenſion of a Noun.

Singular Number.	*Plural.*
Caſes.	Caſes.
Nom. *a book.*	Nom. *books.*
Gen. *of a book.*	Gen. *of books.*
Dat. *to a book.*	Dat. *to books.*
Accuſ. *a book.*	Accuſ. *books.*
Voc. *o book.*	Voc. *o books.*
Ab. *with, from, in,* or *by a book.*	Ab. *with, from, in,* or *by books.*

Thus, Prepoſitions are uſed to vary the Engliſh caſes, but in Latin, the termination of the words themſelves are varied in the ſeveral caſes, without any other help.

Here the teacher can enlarge upon the change of the termination of nouns in the plural; as for inſtance, *man*, in the ſingular, makes men in the plural; *woman*, women; *horſe*, horſes; *miſtreſs*, miſtreſſes.

3. The ADJECTIVE, which in Engliſh never varies its termination, except in the three degrees of compariſon, expreſſes the *nature*, *quality*, *colour*, *ſize*, or other accidental circumſtances belonging to the noun, and comes from he Latin word *adjecto*, to put to, or add, by way of aſſiſtance: it always goes before the noun in a ſentence, muſt accord or agree with it in gender, number, and caſe, termed in grammar *concord*,

concord, and cannot make ſenſe without one; for inſtance, *good*, *bad*, *diſagreeable*, *beautiful*, cannot make compleat ſenſe of themſelves; but if to them you add the nouns *man*, *woman*, *ſmell*, *flower*, they will make ſenſe and concord, or agreement; as *a good man*, *a bad woman*, *a diſagreeable ſmell*, *a beautiful flower:* theſe four adjectives are qualities. If you ſay *man good*, *woman bad*, *ſmell diſagreeable*, *flower beautiful*, it would not make proper grammar In the concord, a green tree, a black horſe, a white cat, the words *green*, *black*, and *white*, are adjectives, becauſe they are the colours of the tree, horſe, and cat, which being ſubſtances, and you can ſee them, are therefore nouns ſubſtantive.

In the ſentences, a vaſt building, an extenſive garden, a great dog, a little boy, a large pond, the words *vaſt*, *extenſive*, *great*, *little*, and *large*, are adjectives, becauſe they are expreſſive of the ſize and dimenſions of the nouns which follow them.

An adjective may be known by its making ſenſe with the addition of the word *thing*, as a *right* thing, a *wrong* thing, a *black* thing, &c.

Whenever then, in a ſentence, you meet with a noun, or any thing that has ſubſtance, or which you can ſee and touch, you may be ſure it is either preceded by an *artiele*, a *pronoun*, or an *adjective*. An adjective is always written with a ſmall letter.

ADJEC-

ADJECTIVES have three degrees of compariſon or gradations of quality; *viz.* the Poſitive, which is the ſimple adjective, or firſt ſtep; as, *good*; the Comparative, which increaſes the quality another ſtep, or degree; as, *better*; and the Superlative, or third ſtep or degree, which raiſes the quality to its higheſt pitch; as, *beſt*.

Examples.

Poſ.	Comp.	Super.	Poſ.	Comp.	Super.
Bad,	*worſe,*	*worſt.*	*White,*	*whiter,*	*whiteſt.*
Poor,	*poorer,*	*pooreſt.*	*Clear,*	*clearer,*	*cleareſt.*

Here the teacher may enlarge and extend the examples in all their varieties.

4. A PRONOUN is a part of ſpeech uſed inſtead of a noun, to avoid the too frequent repetitions of names and other things: it comes from a Latin word *pronomen*, meaning *for* or *inſtead* of the noun; becauſe, in ſpeaking to you often, JOHN DAY, when I ſay *you* inſtead of repeating your name always, I ſave trouble, and leave out the noun: when ſpeaking often of your next neighbour, GEORGE BELL, I ſay *he* or *him*: when ſpeaking of myſelf I ſay *me* or *I*, inſtead of uſing my name; when ſpeaking of ſeveral together, I ſay *they, them, us, you.*

Theſe are called *perſonal pronouns*, becauſe they relate only to perſons; but there are three other

other kinds of pronouns termed *poſſeſſive*, *relative*, and *demonſtrative*.

The *poſſeſſive* ſignify property or poſſeſſion; as your book, my knife, his horſe, their garden; here *your*, *my*, *his*, *their*, are poſſeſſive pronouns.

The *relative* ſignify a reference, kindred, or relation to; as, which book, whoſe houſe, what man: here *which*, *whoſe*, and *what*, are relative pronouns.

The *demonſtrative* ſignify pointing out or particularizing, from the Latin word *demonſtrare*, to point out. In the ſhort ſentences, that wall, this plank, thoſe trees, theſe children, the words *that*, *this*, *thoſe*, and *theſe*, are demonſtrative pronouns, becauſe you are probably pointing to them with your finger, or alluding to them in converſation.

All pronouns, except *I*, are written with ſmall letters, unleſs they begin a ſentence.

The perſonal pronouns are called *ſubſtantive*, and the three others *adjective*.

The teacher ſhould make every pupil in the claſs give an example upon the ſeveral pronouns, and the ſame with reſpect to nouns and adjectives, or any of the other parts of ſpeech.

5. Every word in a ſentence that means *to be*, *to do*, *to exiſt*, *to ſuffer*, or that implies motion or action, is a VERB; and by that rule you will always

always be able to fix upon the verb, if you give yourſelves the leaſt trouble to think and conſider; for inſtance, in the following ſentences tell me which are the verbs.

	Anſwer.
To be? or, not to be? that is the queſtion.	*be, is.*
To do good is godlike, to do ill diabolical.	*do, is.*
To exiſt, to live, and to move, is given to animals.	*exiſt, live, move, is given.*
That man walks very faſt.	*walks.*
This boy eats enormouſly.	*eats.*
I run faſter than my brother.	*run.*
You write and read better than me.	*write, read.*
I am wounded.	*am.*

Here the words *be, is, do, is, exiſt, live, move, is given, walks, eats, run, write, read, am,* are verbs; becauſe they imply either motion, being, doing, or ſuffering.

In Engliſh there are three kinds of verbs, the *active, paſſive,* and *neuter*; but other languages ſub-divide them into a greater variety, as you will ſee when you come to learn thoſe languages: indeed the Engliſh themſelves ſubdivide them into *regular, irregular,* and *defective.*

The

The *active*, as the term itſelf expreſſes it, includes all verbs in which action or doing are implied; as, *I walk, you ride, he eats, they run, ye do, we fight.*

The *paſſive* includes all thoſe in which being and ſuffering are implied, or in which you are the tame, unreſiſting, helpleſs inſtrument, or object of action: it comes from the Latin word *patior, paſſus*, to bear or ſuffer; for inſtance,

I *am whipped* for others faults.
You *are rewarded* for good actions.
He *is driven* from ſociety.
We *were led* chearfully on.
Ye *are impoſed* upon.
They *were* loved.

The *neuter* is that deſcription of verbs which belongs to neither of the above two claſſes, and expreſſes neither action nor paſſion, but being, peculiar modes of exiſtence, or ſtate or condition of being; as, *I am, I ſleep, I ſit, I ſtand, it glitters, it falls, he rejoices, we boaſt.*

There are alſo *auxiliary* verbs which help and aſſiſt the conjugation of the other Engliſh verbs, as the *Latin* word *auxilium*, from whence they take their name, implies.

They are *do, be, have, ſhall, will, may, can, let*, and *muſt*.

All verbs neceſſarily imply an agent, or an object acted upon; and therefore admit with ſenſe and propriety either of the pronouns before

fore them: thus, *I fight, you walk, he is deſpiſed*, are expreſſions that convey a clear and diſtinct meaning. But this will not be the caſe, if you put either of the pronouns before any other part of ſpeech.

Verbs are declined or varied by moods, tenſes, numbers, and perſons.

The moods or modes are particular forms of the verb, ſhewing the manner in which the being, action, or paſſion, are repreſented, and are five in number; *viz.*

The INDICATIVE, IMPERATIVE,
POTENTIAL, SUBJUNCTIVE,
and
INFINITIVE.

The *indicative mood* ſimply indicates, points out, or declares a thing; as, *I hear, you know*, from *indico*, a Latin word conveying that meaning.

The *imperative* is uſed for commanding; as, *march, be gone*; it is derived from the Latin word *imperare*, to command.

The *potential* implies wiſh, poſſibility, obligation or power; as, *I wiſh, I might go home; it may ſnow; they ſhould walk faſter; I can fence:* it is derived from a Latin word *potens*, meaning powerful or able.

The *ſubjunctive* expreſſes a thing under a condition, motive, wiſh, ſuppoſition, &c. and is preceded by a conjunction, expreſſed or underſtood,

ſtood, and attended by another verb; as, *I will love him, though he deſpiſe me; were he willing, he might be rich.* The name of this mood is derived from the Latin word *ſubjungere*, to join or put under.

The *infinitive mood* expreſſes a thing in a general and unlimited manner, without any diſtinction of number and perſon; as, *to do, to hear, to be ill.*

The *tenſes*, or diſtinctions of time, though there can be in reality but three, the *preſent*, *paſt*, and *future*, are made to conſiſt of ſix variations; *viz.* the *preſent*, the *imperfect*, the *perfect*, the *pluperfect*, and the firſt and ſecond *future* tenſes.

The *preſent* tenſe repreſents an action or event as paſſing at the time in which it is mentioned; as, *I eat, I am learning, I love.*

The *imperfect* repreſents the action or event, either as paſt and finiſhed, or as remaining unfiniſhed at a certain time; as, *I loved him for his virtue and probity; they were going to town when I met them.*

The *perfect* tenſe not only refers to what is paſt, but alſo conveys an alluſion to the preſent time; as, *I have finiſhed my taſk; I have ſeen the man you ſent to me.*

The *pluperfect* tenſe repreſents a thing not only as paſt, but alſo as prior to ſome other point of

of time ſpecified in the ſentence; as, *I had finiſhed my taſk before he came.*

The *firſt future* repreſents the action as yet to come, either with or without reſpect to the preciſe time when; as, *the moon will riſe to night: I ſhall ſee him again.*

The *ſecond future* intimates that the action will be fully accompliſhed, at or before the time of another future action or event; as *I ſhall have dined at* (or *before*) *one o'clock. The two houſes will have finiſhed their buſineſs when* (or *before*) *the king comes to prorogue them.*

A *participle* is a certain form of the verb, and derives its name from its participating or partaking not only of the properties of a verb, but alſo of thoſe of an adjective; as, I am deſirous of *knowing* him; *admired* and *applauded* he became vain; *having finiſhed* his work he ſubmitted it, &c.

There are three participles, the preſent or active, the perfect or paſſive, and the compound perfect; as, *loving, loved, having loved.*

The conjugation of a verb is the regular combination and arrangement of its ſeveral moods, tenſes, numbers, and perſons.

The conjugation of an active verb is ſtyled the *active voice*, and that of a paſſive verb, the *paſſive voice.*

The numbers are two, Singular and Plural.

The perſons are ſix, *viz.* three to each number.

Singular.	*Plural.*
I hear.	*We* hear.
Thou heareſt.	*Ye* hear.
He heareth.	*They* hear.

6. An ADVERB, as the term itſelf implies in Latin, is a word joined to a verb or adjective, to expreſs more fully the manner of the action of the verb, and the more particular nature of the quality, colour, ſize, or other accidental circumſtance of the adjective; as, that lady dances gracefully; that gentleman walks aukwardly; that youth reads correctly: here the words *gracefully*, *aukwardly*, and *correctly*, are adverbs, expreſſing or defining the manner of dancing, walking, and reading, which are the verbs in the three ſentences, becauſe they imply motion and action.

One adverb is alſo ſometimes joined to another, as ſhe lives *very frugally*.

That colour is diſagreeably dark; that paſſion of the mind is ſtrongly prevalent; that houſe is inconveniently ſmall: here the words *diſagreeably*, *ſtrongly*, and *inconveniently*, are adverbs, and point out the more heightened explicit nature and circumſtances of the adjectives *dark*, *prevalent*, and *ſmall*.

All

All the adverbs expreſſive of theſe two particular circumſtances relating to the verb and the adjective, end in *ly*; ſo that in *parſing*, when you meet with any word having that termination or ending, you may be ſure it is an adverb.

There are adverbs of diſtance, motion, quantity, affirmation, negation, &c. as *far*, *near*, *faſt*, *ſlowly*, *much*, *little*, *yes*, or *ſurely*, *no*, *not*, &c.

There are alſo adverbs of TIME, as *when*, *then*, *once*, or *at one time*, *formerly*, &c. and of PLACE, as *where*, *there*, *here*, *yonder*, *thither*, *hither*, *whether*, &c.

An adverb may be generally known by its anſwering to the queſtion, How? How much? When? or Where? as in the phraſe, he reads *badly*; the anſwer to the queſtion, How does he read? is, badly.

There are alſo other deſcriptions of adverbs; but theſe are the principal. In learning the Latin language you will better become acquainted with the reſt.

Adverbs are written with ſmall letters, except at the beginning of a ſentence; and ſo are Prepoſitions, Interjections, and Conjunctions.

7. A PREPOSITION, as the word itſelf implies in Latin (*præponere*, to place before) is put before nouns to mark the ſeveral caſes, or before a verb to expreſs the difference of its action: it alſo ſerves to connect words with one another,

and to point out the relation between them, as he rode *from* Bath *to* London: he is *beneath* ſuch meanneſs: they are maintained *by* their brother.

At, by, for, from, in, into, of, to, towards, though, unto, under, with, are Prepoſitions.

8. A CONJUNCTION (from the Latin word *conjungere,* to join together) ſerves to connect and join words and ſentences together; as, My father and mother love him, though he is giddy; but yet they hope he will mend: here *and, though, but,* and *yet,* are conjunctions.

My brother and I went to church, ſince you would not ride out: here *and* and *ſince* are the conjunctions.

He loves me, becauſe I am diligent: here *becauſe* is the connecting word or conjunction.

While I am treating of the Conjunction, there is a circumſtance which I muſt mention, that I have obſerved to be very puzzling to young people, as well to many grown perſons; and that is, the government of the ſubjunctive mood by conjunctions. I ſhall therefore endeavour here to explain it. Some conjunctions require the indicative, ſome the ſubjunctive mood, after them. It is a general rule, that when ſomething contingent or doubtful is implied, the ſubjunctive ought to be uſed; as, "if I *were* to write, he would not regard it;" "he will not be pardoned *unleſs* he repent;" "*if* thou *be* afflicted,

flicted, repine not;" "*though* he *ſlay* me, yet will I truſt in him;" "he cannot be clean, *unleſs* he *waſh* himſelf;" "no power *except* it *were* given from above;" "*whether* it *were* I or they, ſo we preach." Here the Conjunctions, and the Verbs themſelves, which are put in the Subjunctive Mood, are printed in Italics; for inſtance, *were* for was, *repent* for repents, *be* for art, *ſlay* for ſlays, *waſh* for waſhes.

9. An INTERJECTION is expreſſive of all thoſe emotions, paſſions, and exclamations, which are natural to us upon any ſudden ſurpriſe, accident, danger, diſguſt, hatred, love, or deſire.

Examples.

Heavens! what an eſcape was there.

Oh! I am wounded.

Quick, there! out of the way, the paſſage is on fire!

Away! be gone! loathed object of my crime,

Zounds, and fury! ſir, what do you mean?

Deteſtable fellow! how I hate him.

O amiable creature! how I love her.

Ah me! I wiſh I was young again.

Alas! I am undone.

Woes me! ſinful wretch that I am.

The teacher ſhould make the pupils give him in rotation, examples upon theſe ſeveral parts of ſpeech, and practiſe them in that way as much

much as poſſible; the leſs they depend upon books and mere *rote* work the better; they ought to be taught to think and conſider for themſelves; (for even *thought* and *reflection* are to be mechanically *acquired* by habit) and the oftener this ſpecies of ſhort lecture is repeated, for ſome time, the more certain will be the impreſſion on their volatile minds; but it muſt not be made tireſome to them, as the entering into minute details would be.

With reſpect to the Concords and the Syntax of Engliſh Grammar, I cannot do better than refer the reader to *Linley Murray*, where he will find them better and more fully arranged than it would be poſſible for me to do in a work of this general nature; however, the following particulars may be of ſome uſe to the teacher.

In teaching a claſs to *parſe*, I have uſually given them *vivâ voce* a ſentence, and made every boy parſe one word in rotation, till the ſentence is out, attracting and commanding their attention as much as poſſible; and this I have found a much better way than making them write it, or parſe from the book; but they muſt be often practiſed in it, and at firſt it is ſufficient for them to ſtate ſimply to what claſs each word belongs; for inſtance,

"I intend to go to church next Sunday."

I is a perſonal pronoun; *intend* is a verb; *to* is a preposition; *go* is a verb; *to* is a preposition;

ſition; *church* is a noun; *next* is an adjective: *Sunday* is a noun.

In order to make the pupils write the Engliſh language correctly and grammatically, I do not know a better plan than this. Take *Lindley Murray*'s Exerciſes in Falſe Engliſh. Claſs your pupils, and ſet them down twice a week with a blank copy-book or copying-paper: *dictate* to them ten or twelve ſentences *vivâ voce*, from that book. Let three minutes, or ſo, elapſe between each ſentence, to give them time to write it correctly. When all have done, take *his* exerciſe that you think likely to be the moſt correctly done, juſt run it over and ſet right any trifling error he may have committed, and then, making every boy change his own exerciſe with his next neighbour; read over the corrected exerciſe to them aloud and diſtinctly, ſentence by ſentence, each pupil correcting his neighbour's from it at the ſame time. And when all have ſo done, let every one caſt up the number of faults he has found in his neighbour's exerciſe, and put it down in large figures at the bottom of the page: keep a book with all their names ſo arranged and ruled, that you may put down againſt the names every time they practiſe, the number of faults each has committed, and have it at one view before you, to obſerve the progreſs they make; and at the quarter or half-year's end, he who has the feweſt in the total

amount, ſhould have a ſuitable prize or reward.

This is a moſt excellent method, though, perhaps, not generally known: it ſaves the maſter the time and trouble of correcting a great number of exerciſes, and anſwers the ſame purpoſe as if he did: it excites emulation among the pupils, and induces them to much greater attention in making their exerciſes, beſides having the effect of teaching them to correct with exactneſs, by being made the examiners of their neighbours.

The ſame plan may alſo be practiſed in Latin and French with much ſucceſs; in the former by Clarke's Introduction or Turner's Exerciſes; and in the latter from Chambaud, Porny, and many other books of Exerciſe.

All theſe corrections ſhould be made in red ink, to diſtinguiſh *the errors more plainly*.

It is a great help to ſtudy to form judicious arrangements, and it much facilitates the improvement of boys.

The teacher ſhould take care that all the ſentences he ſelects for exerciſe, ſhould be, as much as poſſible, free from corrupt, indecent language, or *double entendre*; and the more of ſhort but forcible matter of morality, religion, and ſcience, they contain, the better.

Linley Murray's ſentences are entirely chaſte.

SECT.

SECT. III.

Writing.

WRITING, as Lord Cheſterfield obſerves to his ſon, is merely a mechanical art, and that by only uſing their eyes with a little attention to it, young people may learn to write any hand without the leaſt labour of the head or perplexity of the mind; but, however, there is a harmony, beauty, and juſt proportion in fine writing, that ſtrikes the eye of the beholder with almoſt as much *tout enſemble* effect, as the ſame properties or qualities when viewed in the *Corinthian* column, or the ſculptured form of the *Venus de Medicis*; and therefore it is not enough to write a hand ſo as to be diſtinctly and eaſily read, but it ſhould, as much as poſſible, poſſeſs thoſe graces and ſymmetry which it is capable of being impreſſed with. It is as eaſy for young people to do a thing *well*, as to do it *badly*; and though it is become a received maxim among the rich and the great, that it is vulgar to write well, or to beſtow any further pains upon it than juſt to be able to write legibly; yet I imagine that though this idea may be faſhionable, and ſuit the indolence of the higher ranks, yet it is far from being a right or a wiſe idea with reſpect

reſpect to themſelves, and it muſt be obvious to every one, that it cannot poſſibly be ſo with regard to the commercial and the middling claſſes of ſociety, or the profeſſions: indeed, phyſicians have long been remarkable for writing *badly*; and it is to me the more ſurpriſing, as the life of a patient may be endangered by a ſingle word in a *recipe* being miſtaken by the apothecary who is to make it up.

Clergymen ſeldom write good hands, but that may probably ariſe from the frequency of writing exerciſes, and the hurry of compoſition at public ſchools and the Univerſity, in early life, which, giving them a haſty incorrect habit of doing it, they never afterwards recover; otherwiſe I do not ſee what ſhould hinder them from writing well and making a practice of it; probably the ſame excuſe may be fairly enough made by medical men brought up in the ſame way.

Attornies generally write a correct and exact hand, though it is a hand peculiar to themſelves and the profeſſion of the law; but, however, it differs from the ſchool and mercantile ſtyles of writing, or any other, yet it is neat, very legible and fair: indeed, their buſineſs requires particular preciſion.

Though when any deſcription of perſons, from the preſſure of the moment, write in a hurry, it cannot be expected to be ſo correctly done

done as when they can take more time about it; yet it does not follow that they ſhould always *ſcribble*, or that good writing is not uſeful and ornamental.

I have often thought that the hand-writing of every perſon is a kind of *index* of the mind; and that from the fine ſtrokes, exactneſs, ſymmetry, and correctneſs of the writing, the fair and unſullied ſtate of the paper, and the neatneſs with which a letter is folded, ſuperſcribed, and ſealed, a very juſt correſponding idea of the writer's mental diſpoſition, habits of neatneſs, and method might be formed; and I have found this obſervation to hold good in particular with reſpect to the fair ſex.

When I ſee a letter clumſily folded up, the paper wrinkled and blotted, a bit of a wafer made uſe of for a whole one, or a dab of coarſe wax, half impreſſed with the writer's ſeal, inſtead of a clear deep impreſſion on fine wax, and the direction *ſcrawled* as if it were done with a ſkewer, I naturally conclude that the writer is careleſs and ſlovenly in every thing elſe; for thoſe who have once acquired habits of neatneſs and exactneſs, can never throw them off, or diveſt themſelves of them.

The ſame idea may be purſued ſtill further, and the internal contents of a letter may enable the peruſer to form ſome notion of the writer's literary abilities, moral ſentiments, diſpoſition

of

of mind, and accuracy of method in buſineſs; for if the ſtyle is vulgar and ungrammatical, looſe and negligent; the ſentiments coarſe, ſelfiſh, and unfair; the language haſty and petulant; the ſeveral points he writes about irregularly introduced, unconnected, and diffuſe, there is very good reaſon for thinking that he is badly educated, unjuſt in his dealings, paſſionate in his temper, and incorrect in his buſineſs.

It may not be amiſs here to ſtate Mr. LOCKE's opinion upon this point. "The writing letters," (ſays this great genius,) "enters ſo much into all the occaſions of life, that no gentleman can avoid ſhewing himſelf in compoſitions of this kind. Occurrences will daily force him to make uſe of his pen, which *lays open* his BREEDING, his SENSE, and his ABILITIES, to a ſeverer examination than any oral diſcourſe."

From hence we may infer the neceſſity of doing every thing correctly, neatly, and methodically in which *writing* is concerned, epiſtolary communication being entirely carried on through that uſeful medium.

That the ſame preciſion and correctneſs which enter into *compoſition*, ought alſo to form principal ingredients in writing or penmanſhip itſelf, can hardly admit of a doubt; and that thoſe flowers and beauties of expreſſion which form the ornaments of the former, ſhould be analagouſly

gouſly interwoven in the latter, by thoſe expreſſive beauties of ſymmetry, fair proportion, and exactneſs of which the art is capable, cannot likewiſe admit of much argument.

I ſhall therefore endeavour to lay down ſuch rules, and make ſuch general obſervations on the practice of the art, as will enable the reader, whether teacher, parent, or other, to form a right judgment on the ſubject, and point out the errors of the young penman, as well as inſtruct and ſhew him how to mend them: for *example* in this caſe is far more effectual than *precept*; and it is much better to delineate with a pencil *how* ſuch and ſuch a ſtroke or letter ſhould have been formed, than merely to tell him of it: this is the practice I have always obſerved; and have found it particularly effectual, even in teaching large claſſes, where the trouble is proportionably much greater than in teaching a ſingle pupil.

The firſt thing to be conſidered is the initiatory practice of writing, and what that principle conſiſts in.

To draw ſtraight but oblique or ſloping ſtrokes, is the firſt attempt the pupil is very properly taught to make. The book ſhould be ſo ruled that the length of theſe ſtrokes ſhould not be too great for the ſize of the hand that is to draw them, or ſo as to ſtrain the exertion of it beyond the limit of that command or power which

which it naturally poſſeſſes: nor on the other hand ſhould they be ſo ſhort as to confine and cramp the pupil's fingers, and bring him into a habit of reſtraining the meaſure of his command of hand, in drawing ſtrokes to the full length or extent of that power, without ſhifting or ſtraining the entire poſition of the hand itſelf, which ſhould always remain fixed, reſting on the third and fourth finger, and leave the two fore-fingers and thumb to play with eaſe and freedom.

It is next a matter of queſtion whether it is uſeful or not to the pupil for the teacher to pencil the ſtrokes for him at firſt, till he has acquired a habit from practice of drawing them ſtraight and correctly. As I conſider writing to be a mere mechanical art, improveable by habit and practice, I am in favour of the ſtrokes being penciled at firſt, and when that has been uſed for ſome time, to croſs-rule the page with oblique lines upon an angle of forty-five degrees, which is the proper meaſure or degree of the inclination of a ſtroke in writing; and then let him ſlope the ſtrokes himſelf parallel or even with thoſe lines, ſo that he will have a conſiderable guide to aſſiſt his eye; for the eye is the only guide he will afterwards have, as he leaves off the uſe of plummet or pencil lines, which are only the young penman's leading-ſtrings.

Before

Before, however, the pupil is ſuffered to attempt to put the *pen* to paper, he muſt be taught to *ſit* in the proper poſture, and to *hold the pen right*; and in this early ſtage of the buſineſs, too much attention cannot be paid to theſe two circumſtances; for if he is ſuffered to begin with wrong habits, they will grow upon him, and he will not be able to get the better of them without a great deal of after-care and trouble: prevention is always better than remedy.

Two parts of an action ſhould never be taught at the ſame time, if they can poſſibly be ſeparated, as in this caſe they can; therefore the poſture and the holding the pen properly ſhould be firſt learnt, before the pupil dips it in the ink to proceed further. Let the height and ſlope of the deſk, and the height of the chair or form he ſits upon be ſuch as ſuits the pupil's ſize and height, ſo that he may ſit with eaſe, and that the improper height of the former may not oblige him to preſs his breaſt againſt the edges, or ſtrain to reach his copy-book, which ſhould be placed exactly ſquare with the deſk or table, and always kept in that poſition; the left arm being preſſed towards the ſide, the body and head erect, and the right arm alſo cloſe to the right ſide. The back of the hand turned upwards in a direct line with the arm, and the pen held between the thumb and the two fore-fingers, at the diſtance of half an inch, more or

leſs,

leſs (according to the ſtrength of the fingers) from the point, which ſhould be placed to the paper in a ſtraight line from the right ſhoulder, and the back or outward curve turned exactly upwards. The point of a beginner's pen ſhould always be broad, and the ſlit long.

This is the right poſition of the *body*, *paper*, and *pen*; and whenever he alters that poſition in any the moſt trifling reſpect, the teacher, whom I ſuppoſe to be carefully watching his motions, ſhould inſtantly ſet him right, and make him keep ſo.

In ſchools, where there are a variety of pupils differing in age, make, and height, there ſhould be three different heights of deſks, and the ſlopes or inclinations ſuch as to prevent the inconveniences before ſtated; and this circumſtance ſhould be particularly attended to with reſpect to females, as they muſt naturally be more inconvenienced by an uneaſy poſture and the preſſure of the breaſt againſt the edges of the deſk, than boys. There ſhould be ſmall narrow rims to the deſks to prevent the books ſliding off, but they ſhould not be ſo high as to render them uneaſy to the pupils' arms. Every deſk ſhould have a foot-board, that the pupils may ſit with the more eaſe, have a better command of the pen, and not be obliged to preſs the body againſt the deſk for ſupport, while the legs are ſuſpended from the form, without any relief

relief for that uneaſy poſture: in ſhort the foot-board, the height of the deſk and the chair or form, ſhould ſo correſpond as to enable the pupil to ſit quite at eaſe, and not to ſtrain the arms or breaſt in reaching the paper, or ſuſpend the legs becauſe they cannot reach the foot-board or rail.

Where young people are privately taught at home, it is a very bad practice to make them write on a flat table: a common deſk, made of deal, covered with green baize, and fitted in point of ſlope and height to the pupil's ſize, with a foot-board or railing, is not very expenſive, and would prove far more convenient to the pupil than a mahogany table, even with a ſlope deſk placed upon it, as it is ſometimes done. A ſtool, with a ſtuffed bottom, and covered with leather, might alſo be made to correſpond with the deſk and foot-board. Indeed, every thing ſhould be done to render the poſture eaſy to the pupil, and to prevent injury to the breaſt by compreſſion againſt the deſk; for if the deſk is too high, it has that bad effect; and if it is too low it will give the child a habit of ſtooping: hence the neceſſity of fitting theſe things exactly to his ſize.

When the pupil by much practice has learned to write ſtraight and parallel ſtrokes correctly, he may then have copies of pot-hooks and hangers, and the eaſieſt letters ſet him, ſuch as *i*, *o*, *l*, *j*,

u, *c*, *n*, *b*, &c. the book being croſs-ruled with the oblique lines at equal diſtances, and of a text *n*'s breadth.

But before we proceed further, it is neceſſary to obſerve, that according to the moſt eminent maſters of the art of writing, there are five fundamental rules to be indiſpenſably attended to, *viz.*

1. To write or draw *ſtraight* ſtrokes, that is without a bend, curve, or twiſt in them.
2. To draw *parallel* ſtrokes, or ſtrokes inclining, leaning, or ſloping the ſame way.
3. To make the letters exactly *equally diſtant* from each other, and that is beſt done by croſs-ruling the book with lines at exact equal diſtances, by means of a four-ſided ruler, ſo that within one of theſe ſpaces, which is equal to one ſide of the rule, two ſmall letters, as an *i* and a *c*, or an equal proportion of a larger one, as an *m*, may be contained; for the beginning and finiſhing hair ſtrokes of the *m* muſt neceſſarily be excluded from the ſpace, ſo that the firſt leg of the *m* will be drawn on the firſt or left hand line of the ſpace, by which the legs will be equally diſtant from each other, and thus give the letter its proper proportion; the firſt hair-ſtroke beginning in the center of the preceding ſpace, and the ending

ending hair-ſtroke terminating exactly in the center of the third ſpace; and if an *i* is to be joined to it, forming its down ſtroke upon the hair ſtroke of the *m*, and terminating its own on the next line, where you again begin with any other letter, by this means preſerving always an exact diſtance between your letters.

4. To make all your letters *equally proportioned*, one not being wider than another; and that, as well as equal diſtances, is beſt regulated by the above plan, till the eye itſelf by habit becoming capable of diſcerning the beauties of proportion, naturally produces it without the aſſiſtance of art or method:—hence it follows that the body of an *o*, *g*, *b*, *n*, *a*, *q*, *p*, *y*, *u*, *v*, *k*, and half an *m*, muſt be exactly of the ſame meaſured breadth; nor ſhould any one of them be wider at the top than at the bottom, but preciſely the ſame breadth throughout.

5. To make the tops of letters exactly of the ſame height with each other, the *t* only excepted; ſo that an horizontal line drawn from the firſt topped letter ſhall exactly touch the heads of *l*, *d*, *h*, *k*, &c.—the ſame of all tailed letters, ſuch as *g*, *y*, *q*, *p*, *j*, the loops of which ought alſo to be exactly the ſame breadth; the hair-ſtroke drawn through the *t* to diſtinguiſh it from *l* ſhould always

be upon the line, and even with the bodies of the letters on the upper line.

As the pupil's ſtrength of fingers increaſe, the breadth of the horizontal lines may be extended, ſo that the ſize of the letters may be increaſed to any dimenſion; but that ſhould never exceed the pupil's power or command of hand, or oblige him to ſtrain his fingers and hand out of their proper poſition, to draw a longer ſtroke than he is naturally able to do.

I have always found that writing the copies myſelf on the ſide or top of the book is far preferable to putting ſlip copies before young writers; that may do very well for the more advanced pupils, but is improper for beginners.

I never ſuffer young writers to do more than one line at a time, till I have examined it; and then my firſt care is to correct their errors with a pencil, that they may *ſee* them, and *amend* them in the next line. If a ſtroke is crooked, I draw the pencil line *ſtraight* through it, that he may ſee the deformity more plainly: if a letter is wrong ſhaped, I mend it with the pencil, and alſo form the ſame letter myſelf over his, to ſhew him the difference. If the tops or tails of his letters are unequal in length, I draw an horizontal line through them, to ſhew him that inequality and impropriety.—If one letter is wider than another, I meaſure them, and correct

rect them, to make him obſerve the diſproportion.—If his letters are unequal in diſtance from each other, I meaſure and rectify that diſtance with my pencil—If a ſtroke is thicker in one place than another, I point it out to him and alter it. If he makes an *o*, an *m*, an *a*, or any other letter, wider at top than at the bottom, I meaſure it acroſs, alter it with my pencil, and make him ſenſible of the diſproportion. In ſhort I do not ſuffer a ſingle error in the line to paſs unnoticed, and I make him write the next line amended from theſe corrections.

When he forms any letter particularly badly, I always make him write a line or two of that letter only, till he has done it right.

The pupil ſhould be able to write large hand very well and correctly in every reſpect, before you attempt to leſſen the dimenſions of the lines, or make him write ſmall-hand on ſingle lines; for a hand-writing naturally diminiſhes, and has a gradual tendency to become ſmaller, as the pupil increaſes in years, and has occaſion to practice the writing of exerciſes, which a maſter ſhould never ſuffer on any account to be done in a negligent, ſcribbling, careleſs hand, as more naturally good hands are for ever ruined by that means than can poſſibly be imagined, and, as I have obſerved in another part of the work, one branch ſhould not be ſacrificed to the attainment of another.

Keep the pupil, therefore, as much as poſſible, to the larger hands, and only diminſh them very gradually.

In teaching writing by claſſes, I have always made it a practice to have the pupil's books ready ruled, copied, and good pens prepared for them, that nothing might be wanting when the books are delivered out, and ſilence and attention procured, but to begin; previous to which, however, I have made it a point to ſtate to them, that they were only to write one line each, till I had came round to them, and *that* to be done very ſlowly, deliberately, and carefully, looking at their copies, and recollecting to obſerve the *four* principal rules in writing; *viz.*

1. Straight ſtrokes.
2. Parallel ſtrokes.
3. Equal diſtances.
4. Equal proportions.

When time ſufficient has elapſed for them to write one line, I have then begun with the firſt in rotation at the deſk, pointed out and corrected his errors with my pencil, told him to go on with another line, carefully amending the faults of the firſt; and then to the ſecond in rotation, and ſo on through the whole claſs, till the copies have been all finiſhed, examined, and corrected.

This is the only ſure method of teaching writing with a certainty of improvement; for

it

it is of no avail to let children write a number of copies, day after day, without pointing out and making them punctually mend their faults; ſuch a practice only tends to rivet and confirm incorrect habits.

The teacher ſhould always have by him a number of good pens ready for uſe, and when a pupil has, by chance, got a bad one, it ought to be changed immediately, without loſing time in botching and mending it, and after all, perhaps, making it worſe than it was before.

When a claſs is writing, the teacher ſhould have nothing left to do but to look over the pupils and correct their errors, for that is not the proper time to rule books, ſet copies, or cut pens; as to the make of which the teacher ſhould be as particular as poſſible, cutting them free and eaſy in the ſpring, broad or ſmall pointed, according to circumſtances, ſuch as the ſtrength of the pupil's fingers, his time of ſtanding in writing, the ſize of hand he is practiſing, &c,: the thickneſs of the quill, or its barrel, ſhould alſo be proportioned to the ſize of the writer's hand.

The greateſt attention ſhould always be paid to keeping the paper clean, and therefore the pupils ſhould never be ſuffered to write without blotting or other paper under their hands, covering the unwritten part of the page.

To excite emulation in claſſes, the books ſhould be compared, and a memorandum, in figures, made at the bottom of each page, of the number of faults, and two or three of thoſe who, at the quarter's end, ſhall appear to have the feweſt in caſting up the total amount, ſhould be rewarded by a prize of ſome kind; or every copy ſhould entitle the writer to a certain number of *marks*, according to its correctneſs, which being kept an account of, he who at the quarter's end had the moſt marks, ſhould be entitled to the reward, or if two or three were equal, they might draw lots for it.

Many boys have a trick of not joining the hair-ſtrokes to the down-ſtrokes, and breaking them off again at the bottom of the letters: this is a very incorrect habit, and ought to be ſtrictly prevented or guarded againſt.

In holding the pen, the thumb only ſhould be bent; the two fore-fingers ſhould be extended ſtraight to within half an inch of the nib, and the hand ſhould reſt upon the two outer fingers.

As pupils advance towards thirteen years of age, and, indeed, ſooner, they ſhould be taught to make and mend their own pens, rule their own books, &c. and I do not ſee why young ladies might not alſo be taught to do the ſame: it is a very aukward thing not to be able to mend a bad pen, or rule a few ſtraight pencil lines

lines on occaſion, as ſuch urgent circumſtances frequently occur in life, as to render it equally a neceſſary buſineſs to both ſexes to be able to do: it cannot do harm, but it *may be* of eſſential ſervice.

Copies of well written figures ſhould now and then be given to the pupils; and when they can write well on ſingle lines, they ſhould be made occaſionally to attempt a running or buſineſs hand, and, by degrees, leave off the uſe of pencil and even black lines, which are generally drawn out on thick paper, and uſed under fine paper, to render them more tranſparent. Indeed, in this as in every other branch of education, there ſhould not be any ſudden tranſitions, but the gradations ſhould be ſlow and almoſt inſenſible.

I think, in general, copies, well written by the maſter, are preferable to copper-plate, becauſe they are more natural, but in that the teacher muſt judge for himſelf.

Good black ink, of a proper conſiſtence, not too thick or too thin, is a very neceſſary requiſite towards good writing, and the teacher ſhould always be particulat about it.

When boys have nearly terminated their ſchool education, they ſhould be made to copy letters, bills of parcels, promiſſory notes, receipts, or any other ſimilar matters, inſtead of writing

writing from ſlips; and which, in addition to the exact writing that merchants' accounts will require of them, will give them ſome practice in the theory of counting-houſe buſineſs, before they enter immediately upon it.

What are called FINISHING SCHOOLS in London, are of very great ſervice to young gentlemen deſigned for the commercial line, as they are there more particularly inſtructed with a view to that object, and by maſters practically verſed in the buſineſs.

Such are the academies in *Finſbury Square*, conducted by Mr. Kelly; in *Tower Street*, late by Eton; *George Yard, Lombard Street*, by Mills.

Half a year's inſtruction at one of theſe academies, after leaving a country ſchool, will greatly benefit a youth, and prepare him for the counting-houſe with much advantage.

The German text, the Italian hand for Females, and ſome other departures from the plain common ſtyle of writing, are not ſo much in uſe as they were ſome years ago, but ſtill they need not be wholly overlooked, as in their proper places they are very ornamental, and make a variety in the art of penmanſhip.

I confeſs that the neat Italian hand appears to me to have peculiar and appropriate beauties, when proceeding from the pen of a lady, and

that

that it is perfectly well adapted to the delicate texture of the female fingers, and analogous to their ſlender forms.

SECT. IV.

Arithmetic.

ARITHMETIC is that branch of the mathematics that teaches us the properties and powers of numbers and numerical quantities, and is chiefly uſed in trade, and for aſtronomical purpoſes.

It was a ſcience known to the *ancients*, and even to the *Antediluvian* world, but later ages have made the ſundry diviſions, ſubdiviſions, and improvements, that are now in being, and from whence ſo many ſurpriſing concluſions, numerical, optical, and mechanical, have taken their riſe.

Arithmetic may alſo be defined as a practical branch of the mathematics, which reduces and applies the ſeveral rules found out by ſpeculation, to particular acts and purpoſes, as computing the intereſt of money, the value of goods, the diſtance of places, the quantity of land or liquor contained in a field or veſſel, &c. and theſe particular branches go under various names, as arithmetic, ſurveying, gauging, &c.

It

It is alſo variouſly denominated, as theoretical, practical, inſtrumental, literal, tabular, logarithmical, ſpecious, numerical, &c. according to the mode of explaining or performing its propoſitions.

Arithmetic is the eaſieſt, and conſequently the firſt ſort of abſtract reaſoning, which the mind commonly bears, or accuſtoms itſelf to, and is of ſuch general uſe in all parts of life and buſineſs, that ſcarce any thing is to be done without it.

The youthful pupil cannot be taught it too early, or too perfectly, and he ſhould therefore begin to be exerciſed in figures and counting as ſoon and as far as he is capable of it, and do ſomething at it every day, till he is compleat maſter of the art of numbers.

In teaching a child Addition and Subtraction, I have been in the habit of uſing marbles or halfpence as my medium of inſtruction: for inſtance; *Charles*, you have got *one* marble there; ſuppoſe I give you this nice tau, how many will you have then? *Two:* and if I give you one more, how many will you have? *Three:* and if I give you one more, how many will you have? *Four.* Very well, I will give you two more, if you can tell me how many they will make in all. If the addition of two at once puzzles him, you muſt help him out, by ſaying that three and one

one make *four*, and one more makes *five*, and ſo on of the reſt. This is actual practice.

When by this means he can count the numbers in rotation with eaſe, he may be dodged (as ſchool-boys term it) in this kind of way: Suppoſe, Charles, you have got *three* half-pence, and I give you *three* more, how many will you have? *Six.* Very well; and ſuppoſe your aunt gives you *two* more, how many will you have then? *Eight.* Very right; and if your uncle ſhould give you *three* when he comes, how many will they make in all? *Eleven.* This is Suppoſititious Exerciſe.

To give a child the proper idea of reckoning, ſome *medium* of practice ſhould always be uſed, ſuch as dumps, marbles, and halfpence, for boys, pins, counters, card-fiſh, or halfpence, for girls. The medium ought to be of ſuch articles as they are moſt fond of playing with, or accuſtomed to handle, for in counting theſe things their attention will be more alive to the buſineſs.

Till the child has acquired a compleat knowledge of the units 1, 2, 3, 4, 5, 6, 7, 8, 9, and can reckon them well both by practice and ſuppoſition, I would not let him go further; becauſe the young pupil ſhould never be put upon too much of any one thing at a time, nor attempt two parts of an action or branch of knowledge at once, if they can, by any means, be

ſeparated

ſeparated or divided, without breaking the chain of connection which links them together, but be made perfect in the firſt part before he proceeds to the ſecond.

When the child can count in the way above deſcribed, the unit figures ſhould be written for him on a ſlate; he may then be taught to know and diſtinguiſh them, and, by degrees, to form them himſelf with a pencil, from a large pattern ſet for him by the parent or teacher.

The knowledge of numbers muſt be gradually introduced to the infant mind, which ſhould not have too much of it to attend to at once, but be made ſo perfect in every ſtage of it, that there may be no occaſion to turn back, or any difficulty to get forward. I have ſometimes met with boys of ten or twelve years of age, who have been ſo extremely neglected in arithmetic, that they could not reckon a ſingle line in addition by memory: with them I have been obliged to adopt the practice and ſuppoſition of a medium, as before deſcribed, and I have found it to have a very good effect; for whatever is more immediately applied to their ſenſes and their play-things, will be better underſtood and reliſhed. It is of no uſe at firſt to make children reckon in idea; ſome ſubſtantial articles which they can ſee, feel, and count with practically, muſt be put into their hands; and the more familiar and intereſting thoſe are to them,

the

the clearer will be their comprehenſion of your inſtructions; for that reaſon their marbles, dumps, card-fiſh, counters, pins, and halfpence, are the propereſt.

The ſimple part of Subtraction may be taught children much in the ſame way: as for inſtance; George, you have got three marbles there I ſee, come, lend me one of them. Now, how many have you left? count them. *One, two.* Very well, you have two left; ſo that you ſee if you take *one* away from *three*, *two* remain.

Suppoſe, George, you had eight halfpence, and you were to give *three* of them to a poor man, how many would you have left then? To convince the young pupil of this, and demonſtrate it to him, make him count out *three* and put them in his pocket, and then count the reſt out on the table, the number five he will eaſily perceive to be the anſwer to your queſtion.

Suppoſe, George, you had ſeven dumps, and were to loſe four of them at play with your brother John, how many would you have left then? The teacher might here make him count out four of them on the table, 1, 2, 3, 4, and reckon what were left in his hands, 1, 2, 3; ſo that you ſee you would have three left, George.

This ſhould be made as much an amuſement as poſſible to the child, and any other plan deviſed to lead him inſenſibly into the knowledge

of

of numbers, without its appearing to be made a taſk or a burden to him. Plums and almonds, or any other ſmall fruits, ſugar-plums, or other little *bons-bons* of that kind, might be uſed with ſucceſs, eating them in moderation, being the reward of his accuracy in counting, adding, or ſubtracting; for the *earlier* children are practiſed in theſe initiatory principles of arithmetic, the better.

It teaches them to think and reflect; it mechanically forms and improves the memory by habit, and introduces a turn for preciſion and correctneſs into whatever they do: it is the firſt ſpecies of abſtract reaſoning that can be offered to their notice with propriety and ſucceſs.

Let us now ſuppoſe the pupil of ſufficient age to go to ſchool, to be put under the care of a tutor at home, or to continue a regular courſe of arithmetical inſtruction under his parent's direction.

As in every other branch of education, ſo it is moſt particularly and indiſpenſably neceſſary in that of arithmetic, to be made perfect in the firſt principles before the pupil proceeds further, becauſe, in a long ſum or work where there may happen to be a mixture of all the four firſt rules, if only a ſingle unnoticed error is made in the beginning of that work, his whole time and labour are infallibly loſt.

I have

I have, with much ſurpriſe and aſtoniſhment, ſeen boys, when removed from one ſchool to another, for having been neglected, or not done proper juſtice to, advanced *in their cyphering books* as far as *intereſt, rebate and diſcount*, or perhaps further, when upon trial, they actually could not caſt up two lines in ſimple addition, or tell me how many ſhillings there are in ſixty pence.

Let ſuch *apparent* advanced progreſs, but *actual* backwardneſs, be a trick of the maſter's to cover his neglect, or ſuppoſe it to ariſe from the real ſtupidity of the pupil; in either caſe it is equally wrong: for in the former, if the boy is naturally dull and ſtupid, there is no occaſion to impoſe upon his parents, by giving him the appearance of being a proficient, or telling them that he is clever; or in the latter, to ſuffer him to go a ſtep beyond what he clearly underſtands and is perfect in. For of what uſe is it? the further he bungles on and plunges into the depths of what he cannot fathom, can only tend to embarraſs and retard him the more in *reality*, till at laſt he is perplexed and confuſed, loſt in the mazes of intricacy, and, to make ſhort of the matter, obliged to begin all over again, and return to the very firſt principles of the ſcience. This I have ſeen repeatedly done, and youths of fifteen years of age obliged, with conſcious ſhame, to begin addition once more.

Let therefore the conſcientious teacher never ſuffer his pupil to go to a ſecond rule, till the preceding one is thoroughly underſtood and maſtered.

To purſue a proper plan of teaching arithmetic, it is beſt to begin with practiſing the pupil well on the ſlate, in ſimple *addition*, till he can add perfectly, and with eaſe, four or five lines of figures; he may at the ſame period be taught to underſtand the numeration table thoroughly, and ſo as to be able to tell you at one glance, the numerical value of any number of figures you write down for him. To facilitate his comprehenſion of this table, you might obſerve to him that,

One figure is	a Unit, as	3 is	1 Unit.
Two figures are	Tens, as	34 are	3 Tens.
Three ———	Hundreds, as	456 —	4 Hundreds.
Four ———	Thouſands, as	6176 —	6 Thouſands.
Five ———	Tens of Thouſ. as	27216 —	27, or 2 Tens of Thouſ.
Six ———	Hund. of Th. as	341876 —	341, or 3 Hund. of Thouſ.

And ſo on of the reſt of the Table.

If in adding the pupil is at a loſs, he might either be made to reckon on his fingers, or by ſtrokes drawn on his ſlate, equal in number to the figure he has to add; for inſtance, if he has to add 6 to 5, let him count on his right-hand the thumb and four fingers, or five ſtrokes or dots made on the ſlate, and that will demonſtrate to his conviction that 5 and 6 are 11. I do

do not mention this as if I imagined the parent or teacher unacquainted with the method, but merely to take the opportunity of aſſuring them, from long practice, that the adoption of it is far preferable to *telling* the pupil that 5 and 6 are 11, without *ſhewing* him that it is ſo, by ſome kind of proof and mode to which he may himſelf reſort for aſſiſtance and certainty, when they are not with him, or his memory cannot help him out.

With ſome boys I have found it anſwer equally as well when they were at a loſs to know how many 5 and 6 amounted to, to ſay to them, ſuppoſe you had five marbles, and I were to give you ſix more, how many would you have then? The difficulty being applied to playthings, that their minds are conſtantly intent upon, and which they are in the habit of frequently counting, is ſoon got over, and they will calculate it to a nicety in their minds, without uſing the above deſcribed helps; but if it was a thing in which their attention was not intereſted, the difficulty would not be ſo eaſily ſolved without other aſſiſtance.

Some boys however are ſo ſtupid, dull of comprehenſion, and deficient in memory, that neither of theſe plans will anſwer the purpoſe, and they muſt be told every figure as they go along, which makes no impreſſion on the mind, or if it does, it is only for the moment while

the leſſon laſts. With ſuch pupils the teacher can only have patience till a change takes place in the unfolding of their impeded faculties, which ſometimes *does* happen, though late, but is not always to be depended upon; for ſome grow old in that ſtupidity which marked their earlier years.

"Line upon line, precept upon precept," from the teacher, and frequent attentive repetition of the ſame figures and lines of figures, is the only chance that boys of dull conceptions have of learning any thing at all in arithmetic. I have made ſome ſuch boys go over the ſame work in addition to me five or ſix times in an afternoon, till they had it almoſt by heart, and there is no other method of beating it into them but that.

While pupils are in the four firſt rules, they ought regularly to go over every ſum to the teacher, and not as the cuſtom too much is, be ſet down merely to work it themſelves, copy it from another's book, or get a ſchool-fellow to work it for them: a conſcientious teacher muſt not be ſatisfied with that kind of deceitful performance, but he ſhould always examine the pupil as to his knowledge of the work, and actually make him go over it. For this early precaution and care he will be amply compenſated afterwards, as the pupil advances in his progreſs, by the correctneſs with which he will be enabled to work more intricate ſums without giving the

teacher

teacher the ſmalleſt trouble; but if the foundation is not well laid, much after-trouble and vexation are the certain conſequence both to the teacher and the pupil.

When your ſcholar is very perfect in the ADDITION of whole numbers, he may proceed to the SUBTRACTION of integers, which is much ſooner attained than addition, becauſe it is ſimple, and contained in a ſmaller compaſs.

Here again the *medium* of marbles and halfpence may be advantageouſly uſed, in the ſimple part of the rule, as I have before obſerved and given examples of.

While the pupil is thus learning to ſubtract, he ſhould be preparing for MULTIPLICATION, or the third rule, by occaſionally getting by heart a ſmall portion of the table, till he has made himſelf complete maſter of the whole; and when that is done, he may begin the rule with ſucceſs; but till that is effectually impreſſed on his mind, it is time and labour loſt to attempt to work a ſum in it, and even then the teacher ſhould carefully make him go over the work twice at leaſt to himſelf; for it is only by ſecuring the certainty of his correct acquaintance with what relates to the four rules, that the ſucceſs of his future progreſs is to be determined.

In learning the multiplication table I would make the pupil go through it at full length, as

twice 1 are 2, twice 3 are 6, and ſo on till 12; and not begin 3 times 3 are 9, omitting the 1 and 2, as is the practiſe with ſome teachers, imagining thereby to ſave time and trouble, which in the end it is far from doing, becauſe it is not ſo plain and impreſſive a method as the other.

When the pupil is very perfect in multiplication, he ſhould then go to DIVISION; and while he is practiſing in it, he ſhould begin the *pence* and *ſhillings* table, to prepare him for addition of money, or compound addition as it is called; and there being no tables neceſſary for diviſion, he will have the more time to perfect himſelf in theſe two, before he proceeds to practiſe the ſums they relate to.

In learning diviſion ſome uſe may be made of the *medium* we have before mentioned, but not ſo much as in the two firſt rules; indeed by this time the uſe of it will not be ſo neceſſary, becauſe the pupil will probably begin to have a tolerable idea of figures, and the diviſion of them into certain numbers; but ſtill it may be practiſed; for inſtance, in dividing 4, 6, 8, by 2. Suppoſe, George, you had four marbles in your hand, how many two's would you have? Let him take four marbles, and reckon the diviſion into two's, and the ſame of ſix and eight. This will lead him to think, and try the plan in more difficult caſes.

After

After what I have ſaid on the other rules, it is unneceſſary to obſerve to the teacher that the ſame correctneſs and care is neceſſary to perfect the pupil in this, as it is of the ſame importance to him in every point of view; but I think long diviſion ſhould not be attempted till he has gone through compound addition, ſubtraction, and multiplication.

With reſpect to the pence and ſhillings tables, they ſhould be moſt perfectly impreſſed on the pupil's memory, as they enter into every ſum he is about to work in the compound part of the rules; nothing but conſtant and unremitting practice in making him repeat them to the teacher, can effect that thorough recollection of them which is indiſpenſably neceſſary to their being acted upon; and if he is ſuffered to proceed without that perfect acquaintance with them, it will only confuſe, perplex, and in the end retard him. So it will alſo be with the tables of *weights*, *meaſures*, &c. which he muſt now be gradually acquiring by heart, as he goes along.

It is not enough for the pupil to be able to repeat the tables in their natural order, but he muſt, by much practice and exerciſe with the teacher, be able to anſwer at once any *dodging* queſtion out of that regular order; for as the tables are the ground-work and baſis of arith-

metic, the ſuperſtructure can never be well raiſed if that foundation is not firmly laid.

In teaching the pence table I have found it very uſeful to divide it into certain ſtages or diviſions, to aſſiſt the pupil's memory when dodging him in it; as, for inſtance, making the even ſhillings, or the ſcores, the limits of theſe ſtages, I obſerve to the pupil that 12 pence are 1s., and that till he comes to 24 pence, it is one and a penny, one and two-pence, one and three-pence, and ſo on; and that 24 pence making 2 ſhillings, he goes on again, two and a penny, two and two-pence, two and three-pence, till he comes to 36 pence, which making 3 ſhillings, begins another ſtage, or place to reckon from; and ſo on to 48 pence, or 4s., 60 pence, or 5s., &c.

To apply this, if I aſk him how much 38 pence are, I tell him to recollect that 36 pence make 3 ſhillings, and that 38 being 2 more pence, it makes 3 ſhillings and 2 pence.

If I aſk him how much 65 pence make, I deſire him to obſerve that 60 pence being 5s., 65 pence muſt of courſe be 5s. 5d.

If I aſk him how much 29d. make, I tell him to conſider what are the neareſt ſhillings to the 29d., *viz.* 2s., or 24d.; very well, then reckon on to 29, and tell me how many odd pence there are, *viz.* five; of courſe then 29d. are 2s. 5d.

In

In applying this method to the *ſcores* and *tens*, if I aſk him for inſtance how much 22d. make, I obſerve, that 20d. being 1s. 8d., the othe *two* muſt make the amount 1s. 10d. If I aſk him, how much 33d. make, I obſerve, that 30d. making 2s. 6d., the odd 3 muſt make the amount 2s. 9d.

The ſhillings table may be divided into ſcores or pounds in the ſame way, every 20 making a ſtage to reckon from; for inſtance, if I aſk the pupil how much 45 ſhillings make, there are two twenties, making 40, and 5 over; or 40 is the neareſt ſtage to the number given, ſo that the amount is 2l. 5s.

The practice in ſums of weight and meaſure ſhould not be attempted till the pupil is *perfect* in compound addition, ſubtraction, multiplication, and diviſion of money.

Theſe obſervations will ſuffice for the four firſt rules, which being the foundation of all the reſt, much will not remain to be ſaid on the ſubject.

Inſtead of making the pupil begin *reduction*, or the *rule of three*, immediately after the four firſt rules, it is, I think, a good plan to inſtruct him previouſly in VULGAR and DECIMAL FRACTIONS; for in many of the preceding rules there are caſes often occurring, in which a knowledge of them is neceſſary. They will not prove more difficult to him in proportion than

than any other rule, if he has a good maſter, and is thoroughly acquainted with the four firſt rules. It may do good, but it cannot do harm, and I believe ſome maſters practice that method with great ſucceſs.

The principal thing that the teacher will now have to attend to, is the ſeeing that the pupil actually works the ſums himſelf, and that he perfectly underſtands them when he brings them up for examination; for, about this period of their progreſs, the idle boys are very apt to copy from each other's books, or get their next neighbour to work the queſtions for them. This deception muſt, therefore, be very carefully guarded againſt, as it tends to confuſe and perplex them in the ſucceeding rules, from their not being thoroughly perfect in thoſe which are paſſed over in the underhand way above alluded to; for all the rules depend ſo much, more or leſs, upon one another, that they mutually aſſiſt and elucidate each other.

The RULE OF THREE is in general rather puzzling at firſt to boys, from the difficulty in ſtating the ſums, and reducing the terms to their proper denominations; but the teacher ſhould make it a point to enable him to comprehend clearly the method of ſtating the work, and bringing the quantities of the terms to the ſame value, before he proceeds further; for inſtance, he might obſerve to him, that in the rule

rule of three there are three terms, ſums, or quantities, given to find a fourth; that two of theſe ſums or quantities are always of the ſame kind or ſpecies of article, ſuch as money, ſhoes, boots, pairs of ſtockings, hundred weights, pounds, and ounces of ſugar, tea, coffee, or any other commodity; and that of them are formed the 1ſt and 3d terms; the ſingle one, whatever it is, always ſtanding in the middle.

If the middle term is a ſmall ſum or quantity, the firſt term will be ſo too, and ſmaller than the third; and if the middle term is a large quantity or ſum, the firſt will be larger than the third. If the firſt term is pounds ſterling only, and the third pounds, ſhillings, and pence, both the terms muſt be reduced to the ſame denominations or parts of a £. *viz.* pence; or if the third conſiſts of farthings, likewiſe, both the terms muſt be reduced to that denomination. Whatever the nature of the firſt and third terms are, they muſt invariably be reduced to the loweſt part or proportion of the integral ſum given.

The middle term, if an integral ſum or quantity, may remain ſo; but it is very probable that its remainders muſt afterwards be reduced to the very loweſt denomination it is capable of: however, as that does not always happen, it is beſt to leave it unreduced, for the chance of ſaving time and trouble.

The

The 2d and 3d terms are always to be multiplied together, and divided by the 1ſt; and if the 2d term has been previouſly reduced to its loweſt denomination, the quotient of that diviſion will be of the ſame name or value, and conſequently muſt be divided again by the very ſame numbers that you multiplied the middle term by, in order to bring the anſwer into whole numbers. If the middle term has not been reduced, the quotient will be whole numbers.

It is for theſe and ſome other reaſons, that I think the knowledge of fractions and decimals ſhould be acquired previous to the pupil's attempting the rule of three.

The beſt *arithmetical* guides are *Dilworth*'s and *Walkinghame*'s, to the latter of which there is a *key* publiſhed, which gives you the ſtatements and principal work of all the ſums or queſtions, by which a great deal of time, trouble, and perplexity, are ſaved to the teacher, who ſhould never be without that key. Vyſe's, Hutton's, Fiſher's, Wingrave's, and Bonnycaſtle's Arithmetic, are likewiſe conſidered as good treatiſes, and there are ſeveral others beſides from which the teacher may make his choice; but theſe mentioned, are, I believe, generally conſidered among the beſt.

In ſchools it is a good plan to procure ſome work containing bills of parcels, and ſuch kind of

of matter, with the total anſwer only put down. Your claſs being prepared with a ſheet of exerciſe or copy-paper, give out the ſeveral *items* of a bill of parcels to them yourſelf, *vivâ voce*, allowing time enough to elapſe between each article, and reading it out ſo plain, that every one may hear and put it down correctly; then make them work each *item*, caſt up the total, and give you the amount; when, if it does not correſpond with the anſwer in the book, they muſt work on till it does. This ſhould be practiſed twice a week, and always the laſt thing before ſchool is over, that the time being ſhort, the pupils may pay the more attention to it, in order to get out the ſooner to play.

CHAPTER

CHAPTER IV.

Of the Claſſics.

In applying the rules and obſervations, I propoſe to lay before my readers, for facilitating the teaching of the claſſics, and the other branches I have undertaken to treat upon, I ſhall explain myſelf in as few words as poſſible, conſiſtent with clearneſs and perſpicuity, endeavouring to render them equally intelligible to the teacher and the pupil.

SECT. I.

Of the Latin Language.

In beginning to teach the young pupil the Latin language, in addition to the making him read it correctly, whether, after the Engliſh mode of pronunciation, or that which is more generally uſed in the Scotch Univerſities, and on the Continent, and which approaches neareſt to the original Roman, the teacher ſhould have in view the meaſure of the verſe, and the quan-

tity

tity of the ſeveral ſyllables, (for ſyllables make feet, and feet make verſes,) according to their juſt length or ſhortneſs, as laid down very properly in the ETON Grammar, which I conſider to be the beſt now uſed in ſchools, and preferable to RUDDIMAN's, on that particular account, (though, in every other reſpect, that grammar is unexceptionable.) It is impoſſible for the pupil to read Latin poetry with preciſion, or feel the harmony of it, without a proper knowledge of the feet, &c. which many teachers entirely neglect, and do not even underſtand themſelves. I would adviſe ſuch young aſſiſtants to take the Eton Grammar and ſtudy it; and by teaching others, they will, by degrees, become acquainted with it themſelves.

The next thing to be attended to is the grounding the pupil well in the eight parts of ſpeech. It is in vain for him to attempt beginning to tranſlate, till he has thoroughly fixed in his memory the declenſions, adjectives, pronouns, verbs, adverbs, prepoſitions, interjections, and conjunctions; theſe four laſt are not always ſufficiently attended to, and I ſtrongly recommend to teachers to be very particular about them.

I have known otherwiſe very good Latin ſcholars, from not having been thoroughly made acquainted with them and their diſtinctions, at a loſs to tell to which of theſe four claſſes many little words belonged; and, to attain that particular

ticular point, I conſider RUDDIMAN as the beſt guide. The more material parts of ſpeech teachers will not often overlook, but the four above mentioned are too apt to be very ſlightly paſſed over.

It is now very generally and properly practiſed in printing Latin books, to diſtinguiſh the adverb from the prepoſition by an accent over it, and that facilitates the matter a good deal to the pupil, as far as reſpects adverb and prepoſition, but the difficulty principally ſeems to lay in diſtinguiſhing between the adverb and conjunction. The interjection is pretty eaſily diſtinguiſhed, but the misfortune is, our grammarians do not all ſeem to agree exactly what is a conjunction, and what is an adverb; however, as I obſerved before, Ruddiman is very explicit, and, I believe, very right in thoſe points. There is one obſervation I have always made to my pupils, and which I ſhall juſt mention; it is, that every word not being a noun that relates to time and place, is an adverb; as, *cum*, when; *tunc*, then; *ubi*, where; *quo*, whither, *&c.*

It is by ſuch general and comprehenſive rules as this, that I have always found the cleareſt and beſt ideas conveyed to pupils in every language that I have had any practice in; as, for inſtance, once more, inſtead of telling a boy that a pen is a noun, a horſe is a noun, a deſk is a noun, I have always found it anſwer beſt, and enable

enable him more readily to parſe, to obſerve to him that every thing that can be ſeen, felt, or taſted, is a noun, and ſo on.

When the pupil has got pretty forward in the grammatical part, we will ſay as far as the verbs, he may, by way of variety, learn a leſſon daily in the Vocabulary, the choice of which the teacher may determine according to his own diſcretion, but I think myſelf the *Wincheſter* is the beſt and moſt copious.

I muſt be permitted to obſerve, that the greater ſtore of words the pupil retains in his memory, the better is he fitted for attempting tranſlation; and that juſt in proportion to the quantity of words acquired by heart, ſo will his ſucceſs and facility in tranſlating be, and the neceſſity for the help of an Engliſh tranſlation of the author, greater or leſs; not to mention the proportionate ſhare of trouble, more or leſs, to the teacher.

This is a point which I moſt earneſtly wiſh to impreſs on the mind of every teacher; for I think the longer the pupil is kept to the ground-work, the ſurer and more rapid will his after-progreſs be; and though at firſt it may not appear ſo quick as a fond parent or a conſcientious maſter would wiſh to have it, yet it will ſoon encreaſe its pace, and more than make up for the ſeeming loſt time.

It is upon this point, teacher! that the future ſucceſs of your pupil, in acquiring a juſt knowledge of the language, will depend.

When the pupil has been well grounded in the grammar and vocabulary, let him begin the ſyntax, and at the ſame time *Corderius*, or ſome other of the eaſy authors uſually put into the hands of beginners: and while he is learning to read and tranſlate the languages with correctneſs, let him be accuſtomed to parſing or naming the particular part of ſpeech to which each word belongs, and then to apply the rules of ſyntax, and ſelect examples upon each rule, from the author he is conſtruing.

While he is proceeding in this way, it will be of the greateſt advantage to him to write down in a careful, fair hand, the parſing of two or three ſhort ſentences daily, and an example or two upon four or five of the rules of ſyntax, picked out by himſelf from the author he is tranſlating; I ſay in a correct and fair hand, becauſe I would never ſuffer a pupil to injure one branch of his education, by making it a kind of help to the acquirement of another; I allude to ſpoiling his writing, which, at our public ſchools, is ſo little thought of, that I have been perfectly aſtoniſhed at the unintelligible ſcrawls I have ſeen paſs the maſter's examination with impunity; for if negligence and careleſsneſs is once only

only admitted, and tolerated in the ſmalleſt degree in one branch, it will open the door to the ſame inaccuracy in every other branch; and as all depend, more or leſs, one upon the other, none ſhould be ſlighted or neglected.

The parſing well is abſolutely neceſſary to be thoroughly acquired by the pupil; for without knowing the particular part of ſpeech to which each word belongs, it is morally impoſſible to gain a thorough acquaintance with the language; but beginners ſhould be confined to the ſimple parts of ſpeech, without giving the rules.

I would adviſe the teacher to make his pupil well acquainted with the irregular, defective, and imperſonal verbs; they are of much conſequence, and ought to be often recited. The pupil ſhould alſo be conſtantly exerciſed in declining nouns, pronouns, and adjectives, on the examples in his grammar.

Next to *Corderius*, or ſome ſuch eaſy author, I would adviſe the teacher to put the SELECTÆ *é* SACRIS *et* PROFANIS, alternately into the pupil's hands, becauſe the ſubjects ſelected are generally eaſy and plain Latin, preferable for beginners to *Eutropius* or *Phædrus*. I am aware that *Corderius* is rather going out of faſhion in ſchools, but as there are ſeveral little works proper for beginners, the teacher may make his own choice.

Dr. VALPY has publiſhed a ſmall collection of Latin ſentences, ſelected from the ſeveral claſſical authors, which I think will anſwer very well as a ſubſtitute for *Corderius*. He has, alſo, another publication, termed Latin Dialogues, collected from the beſt authors, which would anſwer the purpoſe very well.

Many boys have a very bad habit of beginning to tranſlate, without firſt reading over the ſentence, in order to gain ſome idea of the general drift and ſenſe of it: this circumſtance ought to be moſt ſtrictly attended to by teachers, who ſhould always make the pupil read to a full point, or, if a long ſentence, to a colon or ſemicolon only, before he attempts to conſtrue it: this practice, ſteadily adhered to, I have always found to produce an almoſt incredible good effect. When the ſentence has been ſo read, let him find out of himſelf the nominative to the verb, or the leading word of the paſſage, and the ſubſtantive governed by the verb, and ſo forth of the reſt of the ſentence, which will always greatly aid and facilitate his tranſlating it.

The teacher ſhould remember, that it is not merely going over the leſſon with the pupil, and helping him on with it, that will make him a ſcholar; but the teaching him how to find out and arrange, by rules, the conſtruction of any ſentence.

When

When the leſſon is conſtrued, make him, at leaſt, parſe four lines of it, and then commit to paper neatly, the ſeveral words ſo parſed, to ſhew up at the next leſſon, or at whatever time you may find it convenient to appoint.

It is by no means neceſſary for me to point out the particular methods teachers ſhould adopt, to put theſe rules and obſervations in practice; it is ſufficient for me to ſtate what I have found to be the moſt uſeful and effectual in the courſe of my own experience, leaving it to my readers to follow them up in that way which they themſelves may find moſt convenient, according to the plan of the ſchool, or the nature of the tuition they are employed in.

I am now addreſſing myſelf to teachers on general principles, as far as reſpects the ſeveral branches I have undertaken to treat of: it is for them to apply them in detail, and to adapt them to their own ſituations, and their pupil's caſes.

After the pupil has been ſome time employed upon the *Selectæ*, the teacher may give him *Eutropius* and *Phædrus* alternately; the former at the ſame time will give him two advantages, that of continuing his Latin, and at the ſame time acquiring an elementary knowledge of the Roman hiſtory: he may at the ſame time, alſo, read the Heathen Gods or Pantheon occaſionally, and begin to turn Engliſh into Latin; for

which purpoſe I think CLARKE's *Introduction* is the beſt that can be put into his hands: the teacher will alſo have the advantage of Mr. *Tocquot's Key* to it, mentioned under a former head of this work.

In writing the exerciſes, I beg leave again ſtrongly to recommend to the maſter to make the pupil write them neatly and correctly, to put the proper points and capital letters, where they ſhould be, *viz.* at the beginning of paragraphs and ſentences, and after a full ſtop; to words that are nouns; to names of men, cities, rivers, &c.; the adjectives, verbs, &c. beginning with *ſmall* letters. In this the teacher cannot be too particular, as it will lay the foundation for preciſion and correctneſs in writing Engliſh, and in every thing elſe the pupil does. Upon a baſis and foundation thus laid, the ſuperſtructure of claſſical knowledge may be eaſily erected; but the ſame exactneſs, the ſame preciſion muſt be ſtrictly continued through every progreſſive ſtage of the pupil's advancement, nor ſhould the teacher ſuffer even a ſingle error in reading to paſs by unnoticed.

All errors in education (ſays Locke,) ſhould be leſs palliated than any other, for theſe, like faults in the firſt concoction of any article that are never mended in the ſecond or third, carry their afterwards incorrigible taint with them through all the ſubſequent parts of life.

In

In correcting the Latin themes or exercises of any kind, the pupil will find great advantages in its being done with *red* ink, to distinguish more clearly and effectually the errors he has committed; and the writing it over fair afterwards will tend to prevent him from repeating the same faults again.

I have also found it very useful to make the pupil write the translation of an easy piece of Latin, and the next day make that English again into Latin *vivâ voce*, and without writing it at all.

In reading the inferior classics, the young pupil may sometimes with safety be permitted to use an *ordo* in learning his lesson, but in reciting it to the master it should be done from the text; very little use, if possible, should be made of an English translation, but to some naturally dull boys it must be allowed as a kind of guide, for probably without some help of that kind they would take a disgust to the language, and never do any good at all. Brighter boys will have no occasion for such assistance; however, in all this the teacher must judge for himself, as it is impossible to lay down any certain rules that will alike apply to every pupil.

If translations and orders can be done without, so much the better; they certainly tend to make boys relax in their application, and not turn over their dictionaries so much as they

ought to do, but otherwiſe I ſee no harm in their being uſed for a time; rather much the contrary, eſpecially, as I have before obſerved, in the caſe of dull and backward boys.

When *Eutropius*, *Cornelius Nepos*, and *Phædrus* have for ſome time been attended to, the teacher may give the pupil Cæſar's Commentaries and Ovid; the one a moſt elegant and perſpicuous proſe writer, and the other an amuſing intereſting poet, full of allegorical beauties and ſublimities, according with the fabulous notions of the times in which he wrote: from him I would ſelect the moſt approved fables, ſuch as Pyramus and Thiſbe, &c.; indeed the *Eton* Selection is the compleateſt that could be well made.

To them Virgil and Terence, alternately exchanged for Juſtin, Tully's Offices, or any other good proſe writer the teacher thinks fit, may ſucceed; and at this period of the pupil's progreſs, more regard than ever muſt be paid to the reading with poetical propriety, and attention to the meaſure of the verſe.

Horace, with Juvenal, Plutarch, Tacitus, and any of the other authors occaſionally dipped into, cloſe the uſual liſt of claſſical books; but the maſter will always be the beſt judge when and what particular author the pupil ſhould read, at the ſeveral periods of his progreſs.

The

The exerciſe of the memory ſhould early be attended to by the teacher, and from the time the pupil begins to read Cornelius Nepos and Phædrus, he ſhould be practiſed every day, by learning five or ſix lines by heart, and ſo increaſing the number as he proceeds in his improvement; but not to carry it ſo far as to make it burdenſome to him, or too difficult to be learned; in that caſe he would be diſguſted with the language, and that ſhould by all means be avoided.

In teaching Latin or Greek, I think it is very neceſſary, if poſſible, (and if the claſs be not too large,) to make the pupil go through the whole leſſon, or he will only partially know it; for many boys have a trick of only learning the few lines that they expect will come to their ſhare.

I repeat it, it is impoſſible to be too particular in conſtantly exerciſing the pupil upon the eight parts of ſpeech, particularly the nouns, pronouns, adjectives, and verbs, making him decline examples upon each of them firſt, and go through the verbs from time to time, always varying the words.

The plaineſt way in which I have found the verbs to be laid down in any grammar is in *Ruddiman's*. In that particular the Weſtminſter is a perfect puzzle to boys, and even to grown people unaccuſtomed to it. For an explanation of

of the various figures in grammar, ſyntax, and proſody, with the Art of Scanning, I refer the teacher to the Eton Grammar, and Dr. Valpy's Introduction, which will be found very uſeful in thoſe reſpects; the pupil ought to be made very perfect in them, and the difference between literal and elegant tranſlations ſhould be pointed out to him.

The attainment of the Latin language is ſo neceſſary to the thorough knowledge of the Engliſh and other modern languages, that it is impoſſible to underſtand them fully without it, ſo many of their words being derived from, or connected with the Latin in ſome way or other. Beſides, the Latin Grammar is very juſtly conſidered as the baſis or ground-work of all the other grammars, in almoſt every language, and particularly the European: indeed there is ſo much of Latin in the Engliſh tongue, that a very accurate knowledge of the one can hardly be attained without ſome knowledge of the other.

The principal end of inſtructing a youth deſigned for buſineſs, in the Latin language (ſays one of our writers,) is to make him a greater maſter of his own; and, in that caſe, the way to apply and render it moſt effectual to that end, is to uſe him frequently to Engliſh tranſlations: the meaning and ſenſe of the authors will thereby be impreſſed on his mind with greater

greater advantage, and in time he will acquire a clear, juſt, and natural manner of expreſſing his thoughts on all occaſions, as well as propriety of ſtyle; and write with that elegance and good ſenſe, which ſo much diſtinguiſh one man from another, and are abſolutely requiſite for all that hope to be conſiderable in the world.

In reading the poets, it is very proper for the teacher to explain to the pupil the fabulous meanings, metaphors, and allegorical references that are always occurring. Many young boys are apt to conceive, (if it be not otherwiſe explained to them,) that what they read of Jupiter, Juno, Venus, Neptune, and the other divinities is true, and not fabulous; indeed they have not any other idea of the matter, if care is not taken at firſt to inform them to the contrary. The teacher, therefore, ſhould tell the pupil upon his beginning to learn Latin, that what he will meet with in the courſe of his progreſs in the ſtudy of that language, reſpecting Jupiter and the other gods and goddeſſes, nymphs, ſylvans, &c. is all *imaginary* and *fabulous*; that ſuch deities never exiſted, but in the corrupt and ſuperſtitious ideas of unenlightened heathens, or in the imaginations of their hiſtorians and poets, whoſe works were greatly aſſiſted and ornamented by thoſe *flowery figures*, and *fabulous ſublimities*, derived from the prevailing

ing notions of the times in which they wrote. I would inform him that there was but one God, the Supreme Creator, Preſerver, and Benefactor of the creatures which he has made; and that all nations of the earth ever had, and ſtill have, ſome idea or notion of ſuch a Being or Power*, but that through ignorance, ſuperſtition, and want of reaſon, they did, and ſtill worſhip that power under various names, ſubſtituting celeſtial and terreſtial objects for the true God. They gave to ideas, thoughts, paſſions, and affections of the mind, a bodily form and ſubſtance; in ſhort, they gave to airy nothing, a local habitation and a name.

In applying this fact to the great founders of all our claſſical knowledge, and to the authors of thoſe beautiful ſpecimens of the Latin language and compoſition, both in proſe and verſe, which have been handed down to us through the long ſeries of ages, immutilated and uninjured, I would inform my pupil what the origin of idolatry was.

I would deſcribe to him that men, having been led away by the warmth of their paſſions, had fallen into the moſt diſgraceful crimes, and that having, by degrees afterwards, loſt the re-

* "The conſent of all men," ſays Seneca, "is of very great weight with us: a mark that a thing is true, is when it appears ſo to all the world: thus we conclude there is a Divinity, becauſe all men believe it, there being no nation, how corrupt ſoever they be, which deny it."

membrance

membrance of their origin and of their Creator, they had formed for themſelves, or adopted new divinities ready made to their hands; that at firſt they worſhipped the *ſun*, *moon*, and *ſtars*, becauſe nothing more beautiful and ſtriking preſented itſelf to their ſenſes, which were alone the guides of their judgment, reaſon being obſcured by appetite, if not totally obliterated from their perverted minds; that in proceſs of time they worſhipped the *ox*, the *goat*, the *dog*, the *ſerpent*, the *crocodile*, and, in ſhort, almoſt every other animal, according to the abſurd and miſtaken notions of the ſeveral nations who adopted them for the objects of their worſhip; that afterwards they paid to men the ſame worſhip that is due to God only; that ſome authors are of opinion, that NINUS, king of *Aſſyria*, was the firſt who fell into this error, towards the year 1945, after the creation, and that having publicly ſet up the ſtatue of his father *Belus*, he had ordered his people to offer up their vows and prayers to this ſtatue; and that after his example, (according to thoſe authors) the neighbouring nations decreed divine honours to their princes and heroes, who had deſerved well of mankind.

I would then inform him that it was by theſe means that Saturn, Jupiter, Neptune, Hercules, and others, were ranked among the inhabi-

tants

tants of heaven, and afterwards paſſed for gods, to whom divine honours were paid by the common conſent of all nations, and eſpecially of the Greeks, who were at that period eſteemed the wiſeſt and the moſt learned people on earth.

I would alſo inform my pupil, that the epocha of the taking of *Troy*, is that which furniſhes us with the neareſt and trueſt date of the fabulous and heroic times: that this great event happened in the 2820th year of the world, and about 308 years after the departure of the children of Iſrael out of Egypt.

That thoſe ages of fiction and romance, where the poets place their heroes, the offspring of the gods, are not very remote from the above-mentioned æra, and that round this epocha, therefore we may gather what is moſt illuſtrious and great in the heroic times; ſuch as the exploits of thoſe worthies embarked in the expedition of the *Golden Fleece*, *Jaſon*, *Hercules*, *Orpheus*, *Caſtor*, *Pollux*, &c.; and that in the age of *Priam*, who was king of Troy, we ſee *Achilles*, *Agamemnon*, *Menelaus*, *Hector*, *Ulyſſes*, *Diomed*, and *Eneas*, with many others, the boaſt of nations, and the pride of the moſt renowned families.

I would alſo inform him, that at this period the tranſactions of Holy Writ are alſo moſt remarkable; ſuch as the prodigious ſtrength of *Samſon*,

Samſon, and his amazing exploits; the adminiſtration of *Eli*; *Samuel*, the choſen prophet of God; *Saul*, the firſt king of *Iſrael*, his victories, preſumption, and unhappy fall: and that to him, in the year 2949, ſucceeded *David*, who was the diſtinguiſhed favourite of Heaven, and is ſtyled, in Scripture, the man according to God's own heart; and that to this pious warrior ſucceeded *Solomon*, famed for his wiſdom and pacific virtues, and for the building the Temple to the Moſt High.

He might alſo be told, that it muſt argue but a very little knowledge of mankind, to believe that idolatry was ſpread throughout the whole world by the ſingle example, and in imitation of Ninus alone; men found the ſources of it in the corruption of their own hearts, and eſpecially in the weakneſs, irregularity, and diſorder of their own imaginations; indeed, as a proof of this, idolatry was found eſtabliſhed in AMERICA upon the firſt diſcovery of it, where there was very little probability of the people ever having heard the name of Ninus mentioned even.

In ſhort, I would account to the pupil for thoſe imaginary deities in this ſummary way: that the Pagans or Heathens had the weakneſs and abſurdity to give imaginary places in heaven, and to rank as gods, (in their own ideal fancy) thoſe

thoſe heroes who had diſtinguiſhed themſelves by their great actions, and the uſeful ſervices which they had done to men, conſidering this as the beſt mode of doing them honour; by which means theſe heroes, at leaſt, lived in their imaginations, and in their poetical works, and are handed down to the notice of poſterity.

In commenting upon this ſubject, the teacher might alſo direct the attention of his pupil to the various accounts of the idolatries of the ſeveral nations neighbouring to and ſurrounding that ſacred land, which was the ſcene of moſt of the occurrences deſcribed in the BIBLE, and in which ſufficient proofs of the general depravity and idolatry of mankind may be found, to keep the Greeks and Romans in ſome kind of countenance for *their* abſurdities.

He might alſo be told, that, at this moment, the *Chineſe*, the *Perſians*, the *Indians*, the *Caffrees*, beſides many recently diſcovered nations, are guilty of the groſſeſt idolatry, owing to the obſcurity of their reaſon, which is dimmed and almoſt extinguiſhed by carnal luſts and appetites, and to that profound ignorance which is the conſequence of the Great Sun of Righteouſneſs and Revelation not having yet ariſen, or even dawned upon their deplorably benighted minds. "*Si ſunt lachrymæ rerum, his de jure debentur.*" "If we have tears to ſhed at others miſeries, theſe are proper objects of them."

As

As the Latin authors, and eſpecially the poets, abound very much in allegories, figures and ſimilies, in aid of the lively imagery of their fabulous compoſitions, it is the teacher's duty, as he goes along, to point out to the pupil the concealed meanings veiled under theſe allegorical forms, and the particular beauties of thoſe figures and ſimilies that are ſo plentifully ſcattered up and down throughout their works; and alſo thoſe narrative incidents of Pagan traditional hiſtory, which accord with the ſacred hiſtorical facts contained in the Bible.

For inſtance, I would obſerve to him, that it is evident the Romans were acquainted, by tradition or otherwiſe, with the circumſtance of the creation, the happy ſtate of Paradiſe, repreſented under the idea of the golden age, and eſpecially the GENERAL DELUGE, from the very intereſting and affecting manner in which it is deſcribed by *Ovid* in the firſt book of his Metamorphoſes; to which I would make the pupil turn and read the poetical deſcription of it, while his mind was intent upon the ſubject, explaining to him the great ſimilarity there is, between the Pagan hiſtory of that deluge, in which *Deucalion* and *Phyrra* are the only reſcued, and that of ſcriptural authority of which *Noah* and his family are the only ſurvivors: but I would not ſtop there, I would deſcribe to him what was meant by the allegorical alluſion of *Deucalion*

and *Pyrrha* being ordered *to caſt their mother's bones behind them,* ("*Materna oſſa poſt tergum jactare,*") explaining it as an order to throw *ſtones* behind them, which being the hardeſt ſubſtance on the ſurface of our mother earth, Ovid terms its *bones.*

The teacher might alſo, upon this point, remark to the pupil, the near affinity this has to the declaration of Scripture, "*that we were taken from the duſt, and muſt return to duſt:*" indeed, upon all occaſions I would accuſtom him to compare the ideas and opinions of the *profane* writers with the *ſacred,* by which he will perceive, even through the veil of ignorance and ſuperſtition, a moſt amazing coincidence and connection of thoughts between them, proving that even the unenlightened heathens were not unacquainted with many of thoſe hiſtorical facts, which are noticed in the ſacred writings, and that we ſhould conſequently give the greater credit to the truth of our holy religion, from circumſtances ſo ſtrongly corroborated.

Beſides pointing out to him the religious and ſublime veneration with which the poet ſo beautifully makes the reſcued pair approach the temple of the goddeſs, to return thanks for their deliverance, and conſult the Oracle as to their future fate, I would point out to him the elegance of the previous affecting addreſs of *Deucalion*

calion to his wife. "*Oh ſoror! Oh conjux! Oh femina ſola ſuperſtes!*" &c.

On ſuch an occaſion as this, I would alſo give him to underſtand, that though the Romans were ſunk in ſuperſtition and idolatry, there were, notwithſtanding, among them, men of ſuch ſuperior and enlightened minds, that without the aid of revelation, and by the mere ſtrength and light of nature and reaſon (though but a glimmering one) they had very juſt ideas of the Supreme Being, and of the immortality of the ſoul; very excellent and evident proofs of which may be found in that moſt uſeful compilation, entitled, "Selectæ è Profanis," and which cannot be too ſtrongly recommended to teachers, as very fit to be put into the hands of their pupils, as ſoon as they begin Latin tranſlations: in point of religion, morals, and ſound ſenſe, it is unequalled as a ſchool book: the plan of it was recommended by ROLLIN.

There the pupil will ſee a *Cicero*, a *Seneca*, a *Plato*, aſſiſted only by the mere light of reaſon, arguing in ſuch a way that would do honour to a warm and well informed Chriſtian; nay, ſuperior to the general run of people even in this learned and enlightened age.

He will there obſerve the profound veneration with which the nature of the gods is treated of, the reſpectful homage and reverence recommended as due to them from the objects of their

ſuppoſed conſtant beneficence and protection, and the ideas that were entertained of their omnipotence; he will, with me, regret that men, whoſe minds were ſo ſuperior in knowledge and reaſon, to their fellow-countrymen, and the ſurrounding nations, ſhould have been obliged to grope about in the dark, and vainly ſtruggle to reach that point of certainty, which revelation has enabled us in theſe our days to attain, reſpecting the one only and true God; he will, with me, drop the ſympathetic tear, when he reflects that, loſt in the mazes of doubt and error, the Romans, the lords and maſters of the known world, the literati of their age, the heroes of the earth, in the deplorable blindneſs of their hearts, worſhipped imaginary gods. Oh! had he but deigned to lift up the light of his countenance upon them, had he but permitted the great SUN OF RIGHTEOUSNESS to *ſhine* upon their benighted minds, ſo aſſiſted, what might not have been expected for the good of the human race, from the talents, the virtues, the learning, and greatneſs of ſoul, for which that heroic people were once ſo juſtly admired and celebrated!

I ſaid SHINE—for that GREAT SUN was then *ariſing* in Bethlehem of Judea, in the days of Auguſtus Cæſar, when Roman literature and fame were at the higheſt pitch of celebrity; and it is not without reaſon that Virgil's Addreſs to Pollio,

Pollio, is ſuppoſed to be prophetic of that then pending great event. Here again a field opens for the teacher to point out to his pupil the great aſſiſtance derived from Pagan hiſtory and learning, in aſcertaining and confirming the facts of our holy religion: he might here ſtate to him, that upon the indiſputable authority of Roman hiſtorians then in being, and the governor of the province of Judea under Cæſar Auguſtus in particular, a great PERSONAGE, long promiſed to the expecting world, was born in Bethlehem, a ſmall village of Judea, as foretold; and that ſoon after, in conſequence of a decree of the Emperor, that all the ſurrounding countries ſhould be taxed; Joſeph and Mary, the reputed parents of the child Jeſus, alſo went up to Jeruſalem to be taxed; and that Herod, having learnt the circumſtance of his birth, and his future high deſtination, from the *magi* or learned prieſts of thoſe days, cauſed all the children of Judea of a certain age to be murdered, in hopes of deſtroying the ſuppoſed infant rival of his power, and of his maſter's throne.

The teacher might obſerve to his pupil, that JUDEA was then only a tributary province to the ROMAN empire, and governed under the EMPEROR by a Prefect: he might, alſo, give him a ſhort view of the ſtate of civilization and

ſociety at that time throughout the known world, and particularly deſcribe to him the rude and barbarous ſtate of the inhabitants of Britain, by which his curioſity might be induced to trace the origin and progreſs of civilization in his native country down to the preſent day, and be a conſiderable ſpur to his acquiring the hiſtory of England.

In purſuing the ſtudy of the claſſics, I would always endeavour to make them a help to the pupil in the acquirements of other knowledge; and I would loſe no opportunity whatever of commenting upon any paſſages in them that could at all tend to inſtruct him in religion, ethics, hiſtory, geography, aſtronomy, chronology, or, in ſhort, in any of the arts and ſciences that can tend to improve the head, or mend the heart.

In the works of the profane writers before mentioned, as the beſt ſelection for beginners, beſides diſcourſing ſo ſenſibly and reverently of the nature of the imaginary beings, whom they worſhipped inſtead of the true God, who was utterly unknown to them, (though at the ſame time they ſuppoſed them to poſſeſs all the attributes which we generally aſcribe to the Creator) we find them reaſoning with the greateſt juſtice and ſtrength of argument, in favour of and in ſupport of the immortality of the ſoul, and

bringing

bringing ſuch powerful and concluſive proofs to convince their readers of the truth and reality of what they believed, that we might very fairly ſuppoſe an enlightened Chriſtian of the preſent day, to have had a hand in aſſiſting them, if we did not know to the contrary. Let it alſo be remembered, that *Socrates* died a willing martyr to his belief of one only Supreme Being, ridiculing, to the laſt, the idea of many gods.

When M. T. Cicero, in writing to his ſon, affectingly tells him that there is ſomething within him which convinces him that he has a ſoul, that it is immortal, and that the greateſt happineſs he expects or propoſes to himſelf after death, is the meeting again with his deareſt relations and friends, and converſing with the great men and heroes of the age whom he had known, and thoſe of paſt ages of whom he had written; who, in peruſing works breathing ſuch ſentiments, would not almoſt be tempted to believe that life and immortality had then actually been brought to light by the goſpel? but we are ſure they had not; and therefore the greater the merit and praiſe due to thoſe firſt of philophers, thoſe greateſt of men.

I not only conſider claſſical knowledge as the ſureſt means of improving our ſtyle, and perfecting us in human learning; but as a great help to our religious, moral, and philoſophical attainments. The works of Seneca form a

compleat ſyſtem of ethics. Socrates, Plato, and Ariſtotle, in their ſeveral ſpecies of writing, are extenſively uſeful. The Roman and Grecian hiſtorians in general are clear, perſpicuous, and elegant, fit models for imitation by the hiſtorians of the preſent claſſical age; in ſhort, all their writers poſſeſs more or leſs utility, beauty, harmony, and elegance.

In reading ſuch authors as theſe, the pupil is not only to tranſlate the leſſon with preciſion, but the teacher muſt accuſtom him to dwell upon the beauties of the ſeveral paſſages that are pointed out to him as ſuch, and to derive all the knowledge he can of other ſciences, from the alluſions that he will be continually meeting with in the claſſical writers. For inſtance; in Ovid, book 1ſt, line 344, we find

> "*Luna quater junctis implêrat cornibus orbem.*"
> "The moon had four times filled her orb by joining her horns."

I would not ſuffer him barely to tranſlate this, but I would take occaſion to point out to him that it was a *figure* in poetry, and implied that four months had elapſed; informing him, that by the ſcience of *aſtronomy*, we know that the moon takes one of our months to revolve round the earth, and that during this revolution, ſhe has the appearance of a horn or creſcent in her firſt and laſt quarters, which in her progreſs being gradually

gradually filled up, and encreaſing to a compleat orb, is termed, by the poet, joining her horns together, to make that orbicular appearance.

Again, book iii, line 50, of the ſame author:

"*Fecerat exiguas jam ſol altiſſimus umbras.*"
"The meridian ſun had leſſened the ſhadows of things."

Here I would explain to him, that this was another figure to imply noon or mid-day, becauſe, when the ſun is at the higheſt, he is moſt vertical to us, and conſequently the ſhadows of things are leaſt; but that when he riſes in the morning, or declines towards the weſtern horizon in the evening, the ſhadows of things are perceived to lengthen, becauſe his rays then ſtrike horizontally, and not perpendicularly or vertically; he might then be aſked if he had never obſerved that circumſtance.

Theſe two examples will ſuffice to ſhew my meaning; and, I think, this is a uſeful mode of teaching the claſſics, as it unites miſcellaneous knowledge with that of the language.

In addition to what has been already mentioned, I would alſo make the pupil acquainted conciſely with the nature of the ſeveral ſpecies of poetry; ſuch as the *lyric*, the *ſatyric*, the *paſtoral*, *heroic*, &c. deſcribing to him that Horace

race excels in the two firſt, Virgil in the two laſt; and ſo on of other authors.

For advanced pupils, the reading to a full period to diſcover the general drift of the ſentence, and conſtruing it according to the rules of ſyntax, is the only true and proper way to attain the language perfectly, without being obliged to depend upon tranſlations.

The teacher ſhould be very particular in impreſſing upon his pupil's mind the moſt general and leading rules of ſyntax; as,

An adjective agrees with a ſubſtantive.

A verb agrees with its nominative.

An active verb governs the accuſative.

The ablative abſolute, &c. &c.

and in every leſſon that is conſtrued, he ſhould practice him upon them daily, till he is thoroughly acquainted with them.

The nature of the poetical licences, and abbreviations he will meet with, ſhould alſo be carefully explained to the pupil; and, in ſhort, nothing ſhould be omitted, that can tend to facilitate his compleat acquaintance with the ſeveral authors he may read.

It is a matter of ſome doubt whether the making of THEMES is of any eventual ſervice to the pupil. I confeſs I am not an advocate for them, and for the following reaſons: They have

have, it is true, the pretence of ſomething uſeful, which is to teach youth to ſpeak elegantly and well on any ſubject, which, if it could be attained this way, I own would be a very great advantage, there being nothing more becoming a gentleman, or more uſeful in all the occurrences of life, than to be able, on any occaſion, to ſpeak well and to the purpoſe; but this I believe, that the making of themes as is uſual in ſchools helps very little towards it; for only let us conſider what it is in making a theme the young pupil is employed about: it is to make a ſpeech on ſome Latin ſubject; as "*omnia vincit amor;*" or "*non licet in bello bis peccare.*" Now the pupil, whom we may fairly preſume has very little knowledge of theſe ſubjects, and which can only be learned from time and obſervation, muſt ſet his invention on the rack to ſay ſomething, where he knows nothing; which is a ſort of *Egyptian* tyranny, commanding *them* to make bricks who have not yet procured any of the materials; and therefore it is uſual in ſuch caſes, for boys in the public ſchools, to go to thoſe of the higher forms with this petition, "Pray, give me a little ſenſe;" which, whether it is more reaſonable or more ridiculous is not eaſy to determine. Before a youth can be capable of writing or ſpeaking upon any particular ſubject, it is neceſſary to be acquainted with it: otherwiſe it is as fooliſh to ſet him about

about writing or declaiming on it, as it would be to ſet a blind man to talk about colours, or a deaf man about muſic.

In the next place, conſider the language that the themes are made in; it is Latin, a language foreign to the pupil's country, and long ſince dead every where; a language in which it is a thouſand to one he may never have occaſion to make a ſpeech as long as he lives, after he is grown up; and a language wherein the manner of expreſſing oneſelf is ſo different from our's, that to be perfect in that would very little improve the purity and eaſe of his Engliſh ſtyle: indeed I ſee no pretence for this ſort of exerciſe in our ſchools, unleſs it can be ſuppoſed, that the making ſet Latin ſpeeches is the way to teach boys to ſpeak Engliſh well *extempore*.

But it may be ſaid in anſwer to this, that it is to improve and perfect them in the Latin language. It is true this is their proper buſineſs at ſchool; but ſurely the making of themes is not the way to it; that perplexes their brains about the invention of things to be ſaid, not about the ſignification of things to be learned; and when they are making a *theme*, it is thoughts they ſearch and toil for, and not language.

The learning a language is difficult enough in itſelf, without throwing unneceſſary obſtacles in the way of it, as in this caſe; in ſhort, if the

the pupil is to learn Latin, it ſhould be done in the eaſieſt way poſſible, without fatiguing and diſguſting the mind, by ſo intricate an employment as that of making ſpeeches, being attempted as part of the means.

If there is any force in theſe arguments againſt boys making Latin *themes*, there is much more to be ſaid, and of more weight, againſt their making VERSES—verſes of any ſort; for if a boy has not a genius for poetry, it is the moſt unreaſonable thing in the world to torment him and waſte his time about what can never ſucceed: and if he has a poetic vein, it ſhould not in general be ſuffered to be cheriſhed or improved; in fact, it ſhould be ſtifled and ſuppreſſed as much as poſſible. For what reaſon can any one wiſh a youth to become a poet, except it be to diſguſt him of all other buſineſs and employment? which, however is not moſt likely to be the worſt of the conſequences attending it, for if he proves a ſucceſsful rhymer, and once gets the reputation of a wit, it ought of courſe to be conſidered what company and places he is like to ſpend his time in, and his eſtate too, perhaps; for it is very ſeldom ſeen that poets ever grow rich, or diſcover mines of gold and ſilver in Parnaſſus. It is a pleaſant air, but a barren ſoil; and there are very few inſtances of poets ever adding to their income, by any profits they derive from thence.

If

If you do not wiſh a pupil to acquire a diſguſt for buſineſs, to waſte his time, diſſipate his money and ruin his conſtitution, by no means then make him a poet; but if a parent or maſter ſhould conſider *poetry* as a deſirable attainment in a youth, and that the ſtudy of it would enliven his fancy and improve his imagination, they muſt certainly be aware that reading the Latin and Greek poets is more likely to effect the purpoſe, than making bad verſes of his own, and in a language that is not his own. I think he that wiſhed to excel in Engliſh poetry would not imagine that the way to do it was to make his firſt eſſays in Latin verſes.

In ſhort, I would never recommend to parents or maſters to ſuffer the young pupil to make Latin themes or declamatory ſpeeches, and much leſs verſes of any kind; for the intent of learning Latin in general is not to make him either a Latin orator or a poet, but merely to underſtand perfectly the Latin authors; and here I muſt beg leave further to obſerve, that thoſe who teach any of the modern languages, and that with ſucceſs, never amuſe, or rather injure their ſcholars with making ſpeeches or verſes, either in French or Italian, their buſineſs being *language* barely, and not *invention*.

I do not mean by this to diſcourage the ſtudy and cultivation of poetry or declamation in pupils of rank and fortune; but in thoſe of the middling

middling and inferior claſſes of life, to whom ſuch acquirements cannot anſwer any uſeful purpoſe, but on the contrary muſt occaſion a waſte of time, and a neglect of more important buſineſs: the former even ſhould be ſo moderated in their purſuits of them, as to render them merely a matter of amuſement, or helps to public ſpeaking, which is the only line in which ſuch ſtudies can be of any real uſe to them.

There is another circumſtance that I muſt beg leave to make ſome obſervations upon, and that is the learning *memoriter*, or by heart, as practiſed in moſt of our great claſſical ſchools. In learning a language, the means ſhould be rendered as eaſy and pleaſant as poſſible to the pupil, and that which is painful in it as much as poſſible quite removed; therefore I can ſee no advantage at all in his being forced to learn by heart great parcels of the ſeveral authors which he reads. Languages are to be learned only by reading and talking, and not by ſcraps of authors got by heart; with which when a pupil has once got his head ſtuffed, he has acquired the exact furniture of a pedant, and it is the ſureſt way to make him one; for what can be more ridiculous than to mix the good thoughts and ſayings of eminent men with a great deal of his own nonſenſe, which is on that very account the more expoſed, and makes his converſation a compleat piece of patch-work, juſt

juſt like a ruſſet thread-bare coat, adorned with large patches of ſcarlet, and glittering with lace?

Where any paſſages occur that are worth the pupil's remembering, and where the language is cloſe and comprehenſive, it may be very proper to fix them in his mind, and occaſionally exerciſe his memory with them: but the learning every leſſon or the greater part of it by heart, as they happen to occur in the author he is reading without choice or diſtinction, is to no other purpoſe whatever, but to waſte his time and labour, and probably give him a diſguſt for a language, wherein he finds nothing but uſeleſs and unavailing trouble.

Before I conclude my further obſervations on the Latin language, I ſhall firſt make a few looſe remarks on the propriety or impropriety of certain deſcriptions of youth learning it, and the being taught it in a different way from what is practiſed in great ſchools.

Latin I conſider as abſolutely neceſſary to a gentleman; and indeed cuſtom, which prevails over every thing, has made it ſo much a part of education, that boys are even flogged into the attainment of it, and made to waſte much of their precious time in ſtudying it, who, after they have left ſchool, are never expected to have any thing more to do with it as long as they live. Can there

there be any thing more ridiculous, than that a father ſhould waſte his money and his ſon's time in having him taught the Latin language, when at the ſame time he deſigns him for a trade, in which having no manner of uſe for it, he is ſure by degrees to forget that little which he brought from ſchool, and which, perhaps, he naturally diſlikes, for the many floggings and ill uſage it procured him. Could it be believed, unleſs we had every where examples of it amongſt us, that a child ſhould be forced to learn the rudiments of a language, which he is meant never to uſe in the way of life he is deſigned for, and neglect all the while the writing a good hand, and making himſelf maſter of arithmetic, which are of great uſe in every ſituation of life, and in moſt trades or buſineſſes indiſpenſably neceſſary.

But though theſe qualifications, or particular branches requiſite to trade and commerce, are ſeldom or ever to be had at claſſical or grammar ſchools, yet not only do gentlemen ſend their younger ſons, intended for trades, but even tradeſmen and farmers ſend their children, though they have neither intention nor ability to make them ſcholars. If you aſk them why they do this, they think it as ſtrange a queſtion as if you ſhould aſk them why they go to church: cuſtom ſerves for reaſon, and has, to thoſe who take it as their guide, ſo eſtabliſhed

this practice, that they carefully and religiously adhere to it, as if their children could scarcely be supposed to have an orthodox education unless they learned *Lilly*'s Grammar.

The great LOCKE, to whom I am indebted for some of these and other observations scattered up and down this work, is of opinion, that Latin might be learned as we do English, without any grammar at all, or having the perplexity of rules to encounter; as he considers Latin to be no more unknown to a child when he comes into the world than English; and yet the child will learn English without master, rule, or grammar; and so might he Latin also, as Tully did, if he had somebody always to talk to him in that language.

It is observable that a *French* woman will teach a young girl to speak and read French tolerably perfectly in a year or two, without any rule of grammar, or any thing else but talking it to her; and I should not think it at all improbable that boys might be taught Latin in the same way, if a person could be procured who would constantly talk it to them, and make them read it: that would be the true, genuine, and easy way to teach Latin; since, besides teaching the pupil a language without much trouble or chiding, and for which boys are frequently flogged at school for six or seven years together, he might at the same time not only form his

mind

mind and manners, but inſtruct him alſo in ſeveral ſciences, ſuch as *geography*, *aſtronomy*, *chronology*, *anatomy*, beſides ſome parts of *hiſtory*, and all other branches of the knowledge of things that fall under the ſenſes, and require little more than memory.

But if ſuch a perſon, as before deſcribed, cannot be found, who ſpeaks good Latin, and will undertake to teach the pupil on this plan, the next beſt method is to have him taught as nearly as poſſible in that way; which is by taking ſome eaſy entertaining book, ſuch as *Æſop*'s Fables, and writing the Engliſh tranſlation, (made as *literal* as poſſible,) in one line, and the Latin words which anſwer each of them, juſt over it in another. Let him read theſe every day over and over again, till he perfectly underſtands the Latin; (but whatever you are teaching him, beware of burdening him with too much at one time, or reproving or ſcolding him about it; for a teacher ſhould make nothing ſo much his ſcholar's buſineſs as virtue, nor ſhould he reprove him for any thing but vice;) and then go on to another fable, till he is alſo perfect in that, not forgetting what he is already perfect in, but ſometimes recapitulating that to fix it in his memory; and when he comes to learn to write, let theſe be ſet him for copies, which in exerciſing his hand, will alſo improve him in his Latin. This being a more

imperfect way than by *talking* Latin into him, the formation of the verbs firſt, and afterwards the declenſions of the nouns and pronouns perfectly learned by heart, may facilitate his acquaintance with the genius and manner of the Latin language, which varies the ſignification of verbs and nouns, not as the modern languages do, by particles prefixed, but by changing the laſt ſyllable.

When, by this plan of interlining Latin and Engliſh, the pupil has acquired a moderate knowledge of the Latin language, he may then proceed to ſome eaſy Latin author, ſuch as Juſtin or Eutropius; and to make the reading and underſtanding it the leſs tedious and difficult to him, he may be permitted to uſe an *Engliſh Tranſlation*; nor let the objection that he will then only know it by rote, (which when properly conſidered, does not make againſt this way of learning a language, but, on the contrary, decidedly in favour of it,) be at all thought of any force; for languages are only to be learned by rote, and a man who does not ſpeak Engliſh or Latin perfectly by rote, ſo as that having conſidered of the ſubject he means to ſpeak upon, his tongue, without thought of rule or grammar, falls into the proper expreſſions and idiom of that language, does not ſpeak it well, and is not maſter of it; and I ſhould be glad to have the language named to me, that any one can

can learn or ſpeak as he ſhould do by the rules of grammar.

Languages were made not by rules or art, but by accident, and the common uſe of the people; and he that will ſpeak them well, has no other rule but that, nor any thing to truſt to but his memory, and the habit of ſpeaking after the method he has learned from thoſe who are allowed to ſpeak properly, which, in other words, is only to ſpeak by rote.

For the exerciſe of his writing, let the pupil ſometimes tranſlate Latin into Engliſh; but the learning of Latin being nothing but the learning of words, a very unpleaſant buſineſs both to young and old, join as much other real knowledge with it as you can, beginning, however, with that which is moſt obvious to the ſenſes, ſuch as the knowledge of *minerals*, *plants*, and *animals*; and particularly timber and fruit trees, their parts and ways of propagation, &c. by which method a great deal may be taught a boy that will be uſeful to the man.

But if, after all, ſays LOCKE, a pupil's fate is to go to ſchool to acquire the Latin language, it is in vain to ſay any thing concerning the method it is beſt to purſue there; for in ſchools you muſt ſubmit to what you find there, nor expect to have the plan changed for your ſon; but yet, by all means, prevent, if you can, his

being employed in making Latin themes, or declamations, and much leſs verſes of any kind. You may inſiſt upon it, if it will do any good, that you have no deſign to make him either a Latin orator, or a poet, but wiſh him merely to underſtand a Latin author.

Whatever buſtle there is made about learning Latin, as the great and difficult branch of education, a boy's mother may teach it him herſelf, if ſhe will but ſpend two or three hours a day with him, and make him read the Evangeliſts in Latin to her; for ſhe has only to buy a Latin teſtament, and having got ſomebody to mark the laſt ſyllable but one, where it is long, in words above two ſyllables (which is enough to regulate her pronounciation, and accenting the words) read daily in the goſpels, and then let her avoid underſtanding them in Latin, if ſhe can; and when ſhe underſtands the Evangeliſts in Latin, let her, in the ſame manner, read Eſop's Fables, and ſo proceed to Eutropius, Juſtin, Cornelius Nepos, and ſuch other authors.

I do not mention this as a matter of ſpeculation, or a thing that *might* be done, but as a thing I have known done, and the Latin language learnt in that manner with eaſe.—Thus far LOCKE.

NOTWITHSTANDING I have ſaid ſo much on the ſubject of Latin pupils learning the grammar thoroughly,

thoroughly, and particularly the eight parts of ſpeech, yet that is even liable to modification; and there are thoſe who contend that young people ſhould not be perplexed with the minutiæ of grammar, till they have made ſome progreſs in the language itſelf, conſidering grammar only as a ſeries of reflections made upon any language, and being of little or no uſe to any, but ſuch as have ſome competent degree of knowledge in that language of which it is the grammar.

Such teachers carefully avoid, at firſt, the mentioning grammatical terms at all to their pupils, ſuch as the eight parts of ſpeech, or any other circumſtances of grammar, conſidering them as diſtinctions fitter for the abſtracted exerciſes of a logician or metaphyſician, than a young uninformed boy, and maintaining that a child will ſooner learn any propoſition in Euclid, than he can tell you in plain Engliſh, what he means by the genitive and accuſative caſes, and might learn many hundred Latin words before he could underſtand the meaning of the eight parts of ſpeech.

Upon theſe grounds, therefore, ſuch teachers aſſert, that all the words in any language may be reduced to three claſſes, or kinds; *viz.* 1. Words denoting the names of things, or qualities explaining their nature; 2. Words ſignifying any action or ſuffering; and 3. Words which

are employed in joining other words and ſentences together, and in expreſſing the circumſtances of things, and the manner how any thing or perſon acteth or ſuffereth, and ſometimes to expreſs the paſſions of the mind; for what the grammarians call pronouns and participles, are but *qualities* or *adjectives*, and *ego*, *tui*, *ſui*, are names of things irregular in their endings, and doing the office of deputies to other words, for the avoiding frequent repetitions, and therefore called pronouns; and the remaining words, commonly called pronouns, may be reduced under the heads of qualities or adjectives.

This diviſion is ſuppoſed to be very natural for a beginner, and ſufficient for a youth whoſe memory ſhould not be loaded with many diviſions and ſub-diviſions at his outſet.

According to their idea, *Muſa*, a ſong, ought to be thus arranged and learnt.

Muſa, a ſong, o ſong, and from a ſong.
Muſæ, of a ſong, and to a ſong.
Muſam, a ſong.
Muſæ, ſongs, and o ſongs.
Muſarum, of ſongs.
Muſis, to ſongs, and from ſongs.

But, when to take each word in its proper ſenſe, practice alone will teach.

They alſo maintain, that *hic*, *hæc hoc*, has nothing to do with *dominus*, *muſa*, or *regnum*, for that the word *dominus* is not of the maſculine gender,

gender, becauſe it has *hic* before it, but we put *hic* before it, becauſe it is of the maſculine gender.

They alſo obſerve, that verbs are the moſt intricate part of any language, but eſpecially in the Latin and Greek; that a noun, both ſingular and plural, has not above eight or nine different endings to expreſs all its various aſpects and ſignifications; whereas a verb, denoting ſome action or paſſion, may have 150 different meanings, reſpectively different, and all to be diſtinguiſhed only by the various endings of the words: for three things are conſidered in every action; the manner *how*; the time *when*; and the perſon *by whom* it is done.

Theſe teachers, likewiſe, reduce adverb, prepoſition, conjunction, and interjection, under one head, *viz.* that of indeclinable particles, which they very properly obſerve ſhould be got perfectly by heart, becauſe they occur in every ſentence, and to look for them in a dictionary muſt be very troubleſome to a learner, and attended with a great loſs of time.

They maintain that all languages muſt be learnt by rote, and no otherwiſe, urging that we ought to make the road as eaſy as poſſible to young travellers, which is done effectually by that method, without puzzling them with abſtract notions of grammar not ſuited to their age and comprehenſion.

They

They even go ſo far as to aſſert, that one ſheet of paper, either written or printed, will contain as much of grammar as it is neceſſary for boys to be taught before they begin to tranſlate, and that the reſt would follow by degrees, as they acquire ſenſe and judgment to receive it.

It is, indeed, obſervable, that hiſtory, poetry, and rhetoric, are more ancient than grammar, which is the true reaſon of ſo many irregularities and exceptions from general rules, becauſe art was ſuited to language, and not language formed according to art, by philoſophers and wiſe men.

Probably, if a language was made by learned men, the rules of grammar would not be more liable to exceptions than arithmetic.

There are many languages not reduced to grammar at all, and it is difficult to confine living languages to fetters and chains, which will aſſert their liberty in ſpite of critics and grammarians.

The Romans knew nothing of its critical niceties, till *Crates Malotes*, ambaſſador from Attalus, king of Pergamus, 583 years after the foundation of Rome, taught it there, as *Suetonius*, in his *life of famous grammarians*, informs us. Ever ſince that, the Latin tongue has been diſfigured by thouſands of ignorant grammarians copying each others blunders, which leads learners

learners into inevitable miſtakes, by having more regard to the obſcure rules of pedants, than to the diligent reading and imitation of Latin authors, who wrote before the tyranny of grammar came to be ſo much the faſhion; and it is probable that thoſe dull grammarians contributed more to the monkiſh ſtyle of ſubſequent times, than the barbarous nations of the Goths and Vandals.

I ſhall now make ſome further obſervations on teaching the Latin language, and the claſſics in general.

I have met in ſome author, that I do not at this moment recollect, with nearly the following obſervation in ſpeaking of the improper method of teaching Latin in ſchools.

"When I conſidered the former days of my "youth, and the years of affliction, which have "been many: when I was driven on circularly "in Latin bondage, like a *horſe* in a *mill*, con- "tinually moving, but making no progreſs; or, "as a *Jonah* in the *whale's* belly, making long "voyages, but ſeeing nothing about me, and "often threatened by hard taſk-maſters, who "made me ſerve with rigour; I did, in com- "pliance with the dictates of reaſon, and with "my own inclinations, reſolve that my pupils "ſhould, from thoſe misfortunes, reap ſome "advantage, and gain knowledge (by what I apprehend

" apprehend to be) the miſtakes and blunders " of other men."

A good leſſon this for teachers in general, and the example ought to be carefully followed.

To prevent the neceſſity of boys hunting much in the dictionary, and bewildering themſelves, and to aſſiſt them well in ſpeaking any language, an extenſive knowledge of the VOCABULARY, is the beſt remedy; and if ſomething on the plan of the old *Janua Linguarum*, could be formed, it would greatly facilitate the buſineſs: that book contained about 1200 ſhort ſentences, comprehending moſt of the Latin words in general uſe.

Speaking of the importance of the vocabulary, the great Eraſmus ſays, " A thorough " knowledge of words, and a proper naming " of every thing that occurs, is an admirable " and neceſſary foundation for learning; yet " this is neglected above meaſure in the com- " mon methods of teaching; by which omiſſion " it happens, that after children have drudged " on many years in the elements of erudition, " they ſcarce know the proper names of any " thing; even, if at home, the very furniture " about them, or the various neceſſaries which " are there daily uſed, they know not how to " name in Latin; ſo that if they want a napkin " they ſay not *da mihi mantile*, but *da mihi rem*,

" and

" and are either forced to ſupply this incapacity, " by pointing with the fingers at what they " cannot name, or putting in auxiliary words " from their mother-tongue, to explain their " meaning."

In learning any language, we ought to ſpeak *à tort & à travérs*, as the French ſay: for no one ever ſpoke properly, but muſt firſt have committed many blunders, agreeable to the Italian proverb, *per parlare bene biſogna parlare male*.

It is much better to keep the pupil to one book till he has made himſelf maſter of it, than to let him dip into ſeveral authors, and never finiſh one.

In ſome ſchools they make a child read half a dozen pages in Corderius, and then throw it aſide and begin Eſop's Fables, which is treated in the ſame manner, in order to read Eutropius: and when I paſs by a Latin ſchool in a morning, and ſee boys *loaded* with large ſatchels full of books, I pity the boys, and wonder at the maſter's folly. What purpoſe can this practice ſerve, but to make a trade of ſelling books, unworthy of a liberal minded and a conſcientious teacher. It is much the beſt to read an author all through, or, at leaſt, the beſt parts of him: the whole deſign and connection of the ſeveral parts is not to be underſtood by pieces. Do we otherwiſe judge of buildings?

There

There are many academies where the Latin authors are ſo plentifully heaped upon the pupil's hands, that Virgil takes his turn but once a week, perhaps, among the boys; a moſt effectual method, without doubt, to make them underſtand that noble author.

One Greek and one Latin proſe author, are always enough at a time; and when they are pretty well underſtood and gone through, take two more, and after the proſe authors are thus read, then you will begin the poets with double advantage. The reading ſo many different authors at one time, injures the perſpicuity and ſimplicity of the Latin ſtyle. In beginning Cæſar's Commentaries, it ſhould be with a reſolution to read them all through, and then the pupil will become properly acquainted with his various forms and manner of expreſſion.

To attain a good and pure ſtyle, pupils ſhould be made to write over the authors; and with that view I think the ladies ſhould be accuſtomed, by their teachers, to write over the Spectator, Guardian, &c.

The pupils ſhould be made, if poſſibe, to pronounce the Latin full, and with an open mouth, as all the Europeans do, except the Engliſh, whoſe Latin pronunciation is as diſagreeable to foreigners, as it is unintelligible: there is no doubt but the Romans ſpoke it, as the

the Italians do the corruption of it *con bocca plena*, i. e. with a full mouth.

It is much better, in my opinion, to exerciſe the memory (if it muſt be done) in learning geography, chronology, and hiſtory, than in learning fifty lines of an eclogue or an ode by heart, for no other purpoſe but to forget them as ſoon as learnt, or to provide matter for ridicule and pedantry in mixed company, by ſpluttering them out at unſeaſonable times.

Whenever the teacher meets with the names of rare birds, beaſts, fiſhes, or any thing elſe, he ſhould make little digreſſions into natural hiſtory, by relating to the pupil what is ſaid of the eagle, phœnix, ſtork, crocodile, lion, whale, &c. and if he is reading the Latin Teſtament, he ſhould explain to him the morality of the goſpel, as taught by our bleſſed Redeemer, and explain to him, likewiſe, the deſign of Chriſt's coming into the world.

Homer and Virgil are merely ſubjects of amuſement, though, indeed, the latter has a claim of ſomething rather beyond that: *Livy*'s loſt volumes of hiſtory would, however, have been far more uſeful to poſterity; for their ideas and images, as far, at leaſt, as relate to thoſe points only, are of no advantage to us. Epic poetry is of no real importance, nor has it done ſo much good in the world, as, I believe, it has harm.

To

To write Latin and Greek verſes, is, probably neceſſary, in order to know the quantity of words, and, conſequently, to read diſtinctly: ſcanning only will not do; there muſt be practice.

In teaching the claſſics, I would give the pupil ſome deſcription of every place or perſon that occurred in the courſe of his reading; for inſtance, I would explain to him the nature of the puniſhments of Tantalus, Ixion, and Syſiphus, in the infernal regions; I would deſcribe to him what the Elyſian Fields were. &c.

The origin of nations, cities, &c. ſhould alſo be explained to him.

In beginning an author, I would ſtate to him the general outlines and tendency of his work; as for inſtance, in ſpeaking of Virgil, I would obſerve to him, that his work was divided into three parts, or different ſpecies of ſubjects. 1ſt, His Bucolics, or paſtoral poetry, (paſtoral ſignifies of or belonging to the ſhepherd's life, from *paſtor*, a ſhepherd) under the title of Eclogues; 2d, His Georgics, or treatiſe upon agriculture and farming; and 3d, His Eneid, or heroic poem, of which Eneas was the hero; for every ſuch poem muſt neceſſarily have a hero.

I have met with many grown up young men, who, after having gone through the claſſics, could

could not define the meaning of the word Eneid, Iliad, Odyſſey, *&c.* which little circumſtances are of much more importance than teachers are generally aware of, and ought to be previouſly explained to the pupil.

It is very proper, alſo, to comment a little upon the life, talents, and abilities of the author, the pupil may be reading; as, for inſtance, I would obſerve to him that the ſatires and epiſtles of Horace (deſcribing to him at the ſame time what the meaning of a ſatire and an epiſtle is) are full of morality and good ſenſe; that the moſt important precepts of philoſophy are by them conveyed to the mind in the eaſieſt manner; that they give uſeful inſtructions for the conduct of life; diſplay, in the ſtrongeſt colours, the ridicule of vice, and inſenſibly form the ſoul to virtue. That in the *Odes* and *Epodes*, Horace, with ſmiling gaiety, encourages the youth to virtue, and in his ſatires laſhes thoſe who are habituated to vice. He ſhould alſo take care to point out to him the chief poetical beauties, that he may be led, by degrees, to form his taſte to correctneſs and propriety.

I would adviſe young teachers always to look over, out of ſchool hours, the leſſons their more advanced pupils have to go through for the day: they need not be aſhamed of it, for it is

practiſed in all the public ſchools, even by old maſters.

In commenting upon the Greek and Roman authors, I would take occaſion to lead the pupil's attention to the riſe and fall of empires, the viciſſitude of all ſublunary things, and give him in proſpective, through the long avenue of lapſed time, a view of the origin and fate of all the principal nations that *hiſtory* has made us acquainted with.

I would quote to him this moſt impreſſive and emphatic paſſage from Dr. Young, Book IX.

> Nor man alone, his breathing buſt expires;
> His tomb is mortal: Empires die: where, now,
> The ROMAN? GREEK? they ſtalk, an empty name,
> Yet few regard them in this uſeful light,
> Tho' half our learning is *their* epitaph.

He ſhould likewiſe point out to him the difference of idiom between the Latin and Engliſh languages, and the principal difficulties and particular modes of writing peculiar to each author; for inſtance, he might obſerve to him, that Horace and Terence abound with ellipſes, or words underſtood or left out in ſentences, by which the ſenſe of the author is left incomplete, and muſt be filled up before the pupil can properly comprehend it: it is to be obſerved, that on this account the practice of ſchools, is to begin

begin the boys with ſuch books as have the feweſt ellipſes.

The *derivation* of words is another particular point that the teacher ſhould explain, from time to time, to the pupil, as ſo many of the words in the Engliſh language are derived from the Latin and Greek; for inſtance, in reading the word omnipotent, I would tell him that it was derived from the Latin words *omnis*, all, and *potens*, able; able to do every thing: that the word Heliopolis was derived from the Greek words *helios*, the ſun, and *polis*, a city; the City of the Sun.

The ſeveral figures in grammar and ſyntax, ſhould be explained to the pupil, and learnt by heart; for inſtance, I would inform him that an *ellipſis* is the omiſſion of words in a ſentence; a *pleonaſm* the addition of unneceſſary words; that a *periphraſis* is the uſing many words to expreſs one thing; that a *helleniſm* is an imitation of the Greek form; as, *abſtine irarum*, i. e. *ab iris*: that a *barbariſm* is the uſe of a word which is not Latin; and that a *ſoleciſm* is a conſtruction againſt the rules of ſyntax, *&c. &c.*

The *Eliſion*, *Synæreſis*, *Diæreſis*, and *Cæſura*, in ſcanning, ſhould be explained to him in the ſame way.

I ſhall conclude theſe obſervations with an extract from Cardinal Wolſey's inſtructions to

the maſters of his endowed ſchool at Ipſwich, where he was born.

" In teaching the claſſics, make yourſelves " maſters of every paſſage requiring immediate " explanation: for inſtance, in explaining one " of Terence's comedies, you are to preface it " with a ſhort account of the author's life, ge- " nius, and manner of writing. You are next " to explain the uſe and profit of reading co- " medies. You are then to explain the ſignifi- " cation and etymology of the word; to give a " ſummary of the fable, and an exact deſcrip- " tion of the nature of the verſe. You are then " to conſtrue it in its natural order. Laſtly, " you are to be careful to mark out to your " pupils every ſtriking elegance of ſtyle, every " antiquated expreſſion, every thing that is " new, every *Greciciſed turn*, every thing ob- " ſcure, every etymology, derivation, or compo- " ſition, that may ariſe; and whatever is harſh or " confuſed in the arrangement of the ſentence. " You are to mark every orthography, every " figure, every graceful ornament of ſtyle, " every rhetorical flouriſh; whatever is pro- " verbial, all paſſages that ought to be imitated, " and all that ought not." This only fell into my hands after I had finiſhed the claſſical part of this work.

SECT.

SECT. II.

Of the Greek Language.

In teaching the Greek language, the firſt thing of courſe the maſter has to do, is to make the pupil well acquainted with the characters or letters of the alphabet; which, as they differ entirely from all others, will be found conſequently more difficult for him to acquire. The beſt mode that I have ſeen practiſed, is that of making the pupil write them over and over repeatedly, and dodging him up and down till he is maſter of them.

The force or power of the letters is the next object; and here the four principal characters which require particular attention are, the (ε) *epſilon* ſhort, and (η) *eta* long, the (ο) *omicron* and (ω) *omega*; the firſt termed *parvum*, or ſmall, the laſt *magnum*, or great; the one ſounded ſharp, and the other drawn out, or dwelt upon, as if it formed *oo*.

Whether the maſter teaches the pupil to pronounce after the Engliſh or Scotch mode, in which latter is alſo comprehended the Continental method, (and, I believe, approaches the neareſt to the Grecian pronunciation itſelf,) it is a matter of no great moment, if he accuſtoms him to give every letter its full force, and to be exact

as to the length or ſhortneſs of it; for in that as in Latin, the harmony of the Grecian poetry greatly conſiſts.

The table of contractions and abbreviations will be the next thing that will engage the teacher's attention; and to make the pupil compleatly perfect in that, before he proceeds to attempt the grammar or to read, will be abſolutely requiſite. I muſt again remind him of firſt principles, and obſerve, that as in the other languages the greateſt attention is neceſſary to begin the pupil in the right way, ſo in this more care, if poſſible, is requiſite, becauſe the letters, contractions, and other circumſtances, render it proportionably more difficult at the outſet.

In proceeding to the grammatical part, many of the obſervations that I have made under the head of the Latin language, will apply to this; and with reſpect to reading the Greek authors, the ſame hints and advices that I have given to the teacher as to the teaching and explaining the Latin authors, will be found of equal uſe to the Grecian pupil; but, of courſe, there are many circumſtances peculiar to the Greek language, which are not incidental to the Latin; and theſe it muſt be my preſent buſineſs to point out and detail.

As the *vowels* and *dipthongs* are more in number than in the Latin language, the teacher ſhould

ſhould carefully make the pupil remark that difference, and explain the meaning of it to him, impreſſing them thoroughly on his mind, and pointing out the diſtinction made in the conſonants between the *mutes* and *ſemi-vowels*. The (σ) *ſigma* is the only letter that has a particular power of its own.

The *accents* and *ſpirits* are the next objects of importance; and, with reſpect to them, I muſt obſerve, that the ſlight way in which they are too often paſſed over by unexperienced teachers, is of the greateſt injury to the pupil afterwards, when he begins to make ſome advances in reading; I cannot call it progreſs, becauſe nothing can be ſo termed with propriety, which leaves any thing behind it unlearnt.

It is not enough to tell the pupil that there are three accents; the acute, the grave, and the circumflex; or that there are two ſpirits, the ſoft and the ſharp; but he ought to give him repeated examples of them every day, and make him ſelect them now and then himſelf from a Greek author, and commit them to paper; for it is this ſtrict attention to little matters at firſt, that will alone enable the pupil to become perfect as he goes along, and in due time to be maſter of the language.

Of the parts of ſpeech, and the genders of nouns, we need ſay little more than that they are the ſame as in the Latin and other languages;

but with reſpect to the number and caſes, the Greeks differ from the Latin: they make a kind of middle number, termed *dual*, which is uſed where two only are ſpoken of, as in the ſingular we ſpeak of one, and in the plural of ſeveral: they omit the *ablative* caſe.

The declenſion of nouns, adjectives, and pronouns, differ very little in any reſpect from the Latin; the ſame may be ſaid of the adverb, prepoſition, interjection, and conjunction; but with regard to the verbs there is ſome material difference which the teacher ſhould carefully point out and accuſtom the pupil to diſtinguiſh. They have *thirteen* conjugations and three voices; to the active and paſſive they add a middle voice: the *moods* are the ſame as in Latin; but the *tenſes* are more in number; *viz.* in addition to the preſent, imperfect, perfect, pluperfect, and future, they add to the *active* and *middle* voices the *firſt* and *ſecond aoriſts*, which are tenſes of uncertain ſignification; as when it is uncertain whether the thing happened a *little* before, or a *long while* before. To theſe eight tenſes, in the paſſive they add the *paulò poſt futurum*.

I have always obſerved, that Greek pupils are in general more deficient in the verbs than in any other of the parts of ſpeech; not, I believe, becauſe they are more difficult, but becauſe there are more of them, and the matter

apper-

appertaining to them is greater in quantity. It ſhould, therefore, be the teacher's particular care, to impreſs his pupil with a ſenſe of their importance, and of their being correctly and compleatly got by heart, before he attempts to proceed to read an author: it certainly requires patience, perſeverance, and ſtrict application; but in the end it will amply repay his labour; and I conſider the verbs to be ſo certainly the only difficulty, (from the cauſes I have juſt mentioned,) that when once they are maſtered, a grown perſon might, with eaſe, learn the Greek language by himſelf, provided he underſtands Latin well; but I would not make the pupil uſe the Latin but the Engliſh language, in interpreting the Greek verbs.

Among the Greeks are to be found the origin and foundation of all the learning we have, and no man can paſs for a *ſcholar* that is ignorant of the Greek language; though at the ſame time Latin and French are conſidered as ſufficient for a *gentleman*; but, I believe, even among ſcholars themſelves, there are very few in a hundred who retain the Greek they carry from ſchool or the univerſity, or ever improve it into a familiar reading and perfect underſtanding of Greek authors: but ſtill that ought not to prevent or diſcourage thoſe who may have occaſion for it in their profeſſional buſineſs, or who, having a taſte for Grecian literature, might wiſh to cultivate

tivate the language. To ſuch perſons I may ſafely affirm, that it is far from difficult to acquire, or to retain, when kept up by practice and an habitual acquaintance with the beſt authors. Meſſrs. De Port Royal's and the Eton Grammar, are the beſt extant; the former for grown perſons, and the latter for young beginners.

When the verbs and other parts of ſpeech have been correctly learnt, the ſyntax and proſody may occaſionally be made the ſubject of attention, while the pupil is devoting the principal portion of his time to tranſlating; and as they differ very little in their principle from the Latin, I need not notice them here. Eſop's Fables I conſider as a very proper book to begin with, or ſome well ſelected collection of ſhort ſentences, of which there are two or three publications extant; but, previous to that, the pupil ſhould lay in a good ſtock of words from the Vocabulary; for, as I obſerved, under the head of Latin, the larger his ſtore of words, the greater in proportion will be the facility with which he will be enabled to tranſlate: but I do not recollect, at preſent, any well digeſted Vocabulary of the Greek language. I think a publication of that kind is very much wanting, and it might probably be worth while for ſome good Greek ſcholar to undertake it. In ſchools in general, maſters are ſatisfied with giving

giving their pupils a Lexicon and a Teſtament immediately after the Grammar; but though Greek is the original language in which the New Teſtament was written, yet I do not conſider that as a proper book to put into the hands of a beginner, from the peculiarity of its expreſſion and its diſſimilarity to other works; though, at the ſame time, I muſt confeſs there are ſo few eaſy books fit for young beginners, that it would be difficult to do without the Teſtament; however, if it could be left alone for ſome time, it would be read with much more effect. *Schrevelius* is reckoned the beſt Lexcon or Dictionary.

It is uſual for maſters to make their pupils render the Greek into Latin, but that is an erroneous and unneceſſary practice, becauſe it doubles the taſk in a manner; for how can it be expected that boys ſhould be able, with any good effect, to tranſlate one dead language into another with which they can only be ſuppoſed to be partially acquainted, and when they might render it with much more eaſe and profit into their native language? for, as I have before obſerved, it is the teacher's buſineſs to ſmooth and make the way eaſy for the pupil, and by no means to put obſtacles in it, which the practice juſt alluded to does. To teach the French language, you never ſee a maſter make the pupil tranſlate it into Latin, or render the Latin into French.

Homer

Homer is generally conſidered as the firſt poet that ſhould be attempted by the pupil, and I ſee no reaſon to think otherwiſe; but, at the ſame time, it might be of great ſervice to him to exerciſe himſelf firſt for ſome time in the peruſal of the minor poets and proſe authors, ſuch as Anacreon, Sappho, Xenophon, Herodotus, *&c.* in order to read Homer with the greater pleaſure, from having acquired a more competent knowledge of the language previous to his attempting it.

It has always appeared to me, that a thorough acquaintance with the Engliſh language, and the derivations with which it abounds, cannot be acquired without ſome knowledge of the Latin and Greek languages; for in the firſt place, the ſcience of letters or alphabetical characters intended to enable men to communicate their ideas to each other, had its riſe among the Phenicians; from them the Greeks received it, and the Romans or Latins took theirs from the Greeks, and we, as well as other modern nations, adopted the Roman characters for the alphabet of our own language; and not only that, but, in the ſecond place, as a matter of courſe, hundreds of our words are derived from theſe two dead languages, and, not to go far for an example, let us take the word *alphabet* juſt mentioned, by which we underſtand the names and

powers

powers of the letters or characters we make uſe of. It is derived from the names of the two firſt Greek characters, *alpha* and *beta*.

The words geography, aſtronomy, geometry, chronology, phlebotomy, mineralogy, philoſophy, ornithology, and, in ſhort, the names of almoſt all the arts and ſciences, beſides many hundreds of other words are of Greek original; and though an Engliſh ſcholar might, by being told what they implied, deſcribe them in the latter language, yet, in reading, there is ſome advantage and pleaſure to be able to define the meaning of a word, without being obliged to aſk another what it is; for inſtance, an Engliſh ſcholar, in reading a treatiſe on *birds*, will frequently meet with the word ornithology, which, if he has not ſtudied Greek, he cannot poſſibly underſtand, without enquiring what it means; the Greek ſcholar will immediately perceive that it is compoſed of two Greek words, *ornis*, a bird, and *logos*, a deſcription, and means a deſcription of, or the ſcience of birds.

Again, the word hemiſphere in geography, will be perceived by the Greek ſcholar to mean the half of a ſphere, but the Engliſh ſcholar muſt firſt be told it.

It is for theſe reaſons (were there no others of greater weight, which there certainly are) that I would make Greek a very ſerious ſtudy with pupils

pupils who have an opportunity of acquiring it, and though, as they grow up, they may not immediately have occaſion to practiſe the language, yet the knowledge of it will be of infinite conſequence to them, and the teacher ought to point out to them theſe advantages reſulting from it, and make a conſcience of impreſſing them with the importance of it, as well as grounding them perfectly in it.

The reaſons of greater weight, to which I juſt alluded, are, that among the Greeks, as before obſerved, is to be found the origin and foundation of all our learning, and, conſequently, the language itſelf ought to be ſtudied, and the rather as it enables us to read, in its original, the New Teſtament, that ſacred book, which, by its doctrines and promiſes, is the guide to, and the pledge of our redemption and ſalvation; in ſhort, no man who wiſhes to attain, in its native purity, the elegance of claſſical learning or perfection in the ſciences, can do it without the aſſiſtance of the Greek language.

It is remarkable of this language, more than of any other, that in Homer and other poets, the ſounds of the words are muſically or harmoniouſly adapted to the ideas intended to be impreſſed on the reader; for inſtance, where the ſubject is elevated and ſublime, the words ſe-

lected

lected are high-ſounding, full of mouth, (if I may uſe the expreſſion), and give you an idea of the object itſelf, as *poluflóiſboio thaláſſes*, the roaring ſea. In reading the words *korax koraſſon*, the croaking raven, who does not imagine he hears the ominous bird?

Upon this ſubject the teacher may conſult Pope, and other tranſlators, commentators, &c. and enlarge at pleaſure.

The different dialects is another circumſtance the teacher ſhould explain to the pupil, and that he may do in a familiar way, by comparing the Ionic, Doric, Attic, *&c.* to the Yorkſhire, Wiltſhire, or any other of our own counties, by which means it will be better adapted to his comprehenſion.

I would alſo give the pupil ſome idea of the and preſent ſtate of Greece. I would inform him that it is a ſpacious country, now almoſt all ſubject to the *Turks*, and is ſaid to have taken its name from a certain king called *Græcus*; that at firſt its extent was but ſmall, but that, in proceſs of time, it grew very large; that the natives and inhabitants were ſo renowned for their wit and courage, that people reſorted to them from all parts of the world, either to be inſtructed in the ſciences, or to learn the art of war, they being either the inventors or improvers of moſt arts and ſciences; and that they were the

the *firſt* people who ſubmitted to live regularly *by ſtated laws*; that the *Romans* uſed to ſend the children of their *noblemen* to *Athens*, a principal city in Greece, for education, *&c.*

I would then inform him, that they are exceedingly degenerated from what they formerly were, being ſo kept under and over-awed by the Turks, their preſent maſters, that both prieſts and laity are ſo miſerably ignorant, that they do not retain the ſmalleſt traces of the ſuperior learning and talents of their anceſtors; and that they are ſo weak and debaſed, as frequently to abjure the *Chriſtian* religion, and embrace Mahometiſm, in order to procure the quieter enjoyment of the conveniencies of life; and that were it not for the Chriſtian feſtivals, which are, with great veneration, obſerved, it is thought the Chriſtian religion would, long before now, have been eradicated from the coun ry.

A *grand ſecret* of teaching, and what will make inſtruction amuſing to the pupils, is, to inform them fully why they learn this or the other piece of knowledge, what uſe or end they anſwer, and how they will qualify them for ſocial and active life, they will then bear, with alacrity, the fatigue of ſtudy, when they ſee the agreeable ſcope it aims at, and the profit and pleaſure ariſing from it.

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The teacher ſhould, therefore, explain to the elder pupils the uſe and advantage of ſtudying the claſſics correctly, and the particular ſpecies of taſte and ſentiments they inſpire.

I would inform my pupils, that the claſſics form an inſtitution of patient endurance in the affairs of life, rather than of rancour or reſentment. That they render their admirers or votaries capable enough of exertion and buſineſs, but favour an aptitude for mental, rather than bodily labour; that the ſentiments they inſtil are various; the greatneſs they inſpire, is equanimity; the vigour they infuſe, is fortitude; the principle they inſtil, is honour; the vivacity they excite, is pleaſantry; the habits they form are probity, veracity, and fidelity; the rewards they promiſe, are conſcious virtue, and honeſt fame.

That they who enter into the ſpirit of the ſubject they wiſh to maſter, are as much known by the *authors* they read, and the taſte they prefer, as the maſs of people, in common life, by the company they keep.

That he who is drilled in military exerciſe, who rigidly practiſes the injunctions of his dancing-maſter, or who has the good fortune to live in genteel ſociety, is not likely to be addicted to the ſordid manners, or the clumſy, awkward gait of a clown: that there is a poliſh

and grace about the one, which plainly indicate better breeding and ſuperior connections to thoſe of the other; and that it is quite as impoſſible that he who is habitually converſant with elegant language, with the eaſe, the copiouſneſs, and the beauty of natural and juſt expreſſion, and with all the charms and excellencies of good compoſition, ſhould have a bad taſte, unleſs he is alſo an impenetrable, dull fellow, as that he who has always carefully copied the faireſt writing, ſhould write ill, or who, though in daily contemplation of the fineſt forms, ſhould yet prefer the ugliеſt.

I would obſerve to them, that the higher departments of poetry celebrate tranſactions, which, though fictitious, are alſo ſhaped by rules borrowed from nature, and exhibit a mechaniſm of the ſame origin, and the ſame tendency: that Homer, Virgil, Ovid, and many others of our claſſical authors, are full of the moſt picturеſque ſcenes, the moſt rapid and ſplendid actions, characters diſtinguiſhed by all the magnanimous virtues, lofty thoughts, incredible incidents, glowing language, and luminous imagery.

It muſt be very obvious to the teacher, that nothing is more likely to captivate and mould young minds, dazzled and impreſſed with the novelty of ſurrounding nature, than a courſe of reading

reading ſo intereſting and romantic as both the Latin and Engliſh claſſics afford. High courage, daring enterpriſe, hazardous adventure, honourable love, inflexible fidelity, and all the generous aſſociations of real heroiſm, are always in uniſon with the beſt feelings of our hearts, and poſſeſs a charm which, in the hey-day of youth at leaſt, is for the moſt part irreſiſtible.

I would further obſerve to my pupils, that, by an habitual acquaintance with the collected wiſdom of ages, preſented to us in the united labours of all wiſe men, from time immemorial, we imbibe every theory in morals, every doctrine in philoſophy, every improvement in politics, every ſentiment and obſervation, genius, induſtry, and experience afford; which tend to expand our views, to correct our avidities, to elevate our affections, to moderate our expectations, and to extend the circle of our enjoyments.

That our own countrymen have liberally infuſed into their works the genuine ſpirit of ancient literature, and conſiderably enriched our domeſtic treaſure of wiſdom from theſe venerable and fertile ſtores. The genius of Homer ſtill ſoars in Milton; of Virgil and Horace, in Dryden and Pope; of the beſt dramatiſts Greece and Rome have produced, in Shakeſpeare; of Socrates, in Addiſon; of Plato, in Bacon; of

Ariſtotle in Locke; of Livy in Hume; and of Cicero in Burke.

Happy they! (I would obſerve to them) who can read the invaluable labours of thoſe illuſtrious ſages, to which our own are ſo much indebted for ſome of their higheſt merits in the dead languages, and are capable of reliſhing the exquiſite beauties and delicacies which the philoſophy and elocution they combine, ſo wonderfully exemplify.

SECT. III.

Of the French Language.

As the French is the moſt generally ſpoken of any of the European languages, and, from recent events, will probably become more in vogue than it has hitherto been, it is of the greater conſequence in a work of this kind, to lay down the beſt plan for teaching it, in the cleareſt and moſt connected points of view.

I need not obſerve, that the firſt thing to be paid particular regard to, is the impreſſing the pupil's ear with the proper ſounds or pronunciation of the letters, which can only be done by

by very frequent practice, and the minuteſt attention to correctneſs in doing it. Some pupils have what we call a *good ear*, or a facility of catching the proper ſound, and tranſmitting it again, with muſical exactneſs, by means of the voice: this ariſes, I apprehend, from the clearneſs, fine make, and better proportion of that delicate organ, and its greater harmony, as connected with the voice, than is to be found in thoſe who are ſaid to have a *bad ear*; which, I believe, is defined as nothing elſe but a deficiency in the formation of that organ, or a langour and a dullneſs in the exertion of its powers.

The voice, and the organ of ſpeech, its inſtrument, have, through the medium of the mind, which cauſes them to operate or act, in conſequence of the impreſſions made upon it through the ear, a very conſiderable ſhare in the formation of juſt ſounds or right pronunciation; and great attention to this connection between the ear, the mind, and the tongue, ought to be paid by the teacher: it is a mechanical proceſs, and only requires repeated and cloſe practice. Why is it that a *Scotchman* always learns to pronounce the French language ſooner and better than an Engliſhman, or any foreigner? it is becauſe, for the moſt part, the Scotch alphabet is pronounced like the French, and therefore the

Scotch pupil has already acquired the juſt ſound of the ſeveral letters, by the practice of his mother-tongue.

It is not enough for the teacher to tell the pupil he has not pronounced ſuch a letter right, and that he muſt pronounce it ſo and ſo; he muſt, by repeated practice, form his ear and voice to it, and not ceaſe to make him try it day after day, till he has thoroughly acquired it, and can ſound it perfectly at once.

Reading ſhould not be attempted till all the letters can be correctly pronounced. PORNY'S *Analyſe des Sons* (price 1s.) will be found very uſeful in acquiring the true ſounds. A bad ear may be improved by practice, and the cloſe attention of the maſter to correct its deficiencies. But there is a thickneſs or groſsneſs in the *auricular* organ of ſome pupils, that has a *ſtrong* connection with the ſame deficiency in the other bodily, and the mental faculties, and which, therefore, cannot be ſo eaſily remedied; but with the example of Demoſthenes before us, it is proved that great obſtacles may be overcome by proper exertion. The younger the pupil is, the more eaſily will he acquire the juſt ſounds, from the pliancy of his organs. The reaſon that grown people, or even lads after fourteen or fifteen, cannot ſo eaſily acquire the juſt pronunciation of any language, is, the rigidity of the

the organs of hearing and ſpeech, or, in other words, their being more hardened, firmly ſet, or matured; and, under theſe circumſtances, neither pupils of that age, nor their parents, ſhould be ſurpriſed if they do not ſo readily acquire the pronunciation of a language.

When the ſounds of the letters are properly acquired, the pupil may then proceed to read; and here the teacher's attention, and conſcientious care to correct the moſt trifling errors, will be indiſpenſible.

The accents, and their uſe, ſhould alſo now be explained to the pupil; *viz.* the acute, as in *été*; the grave, as in *après*; the circumflex, as in *mâle*.

I think the uſe of the French Spelling Book is very neceſſary for ſome time, eſpecially if the pupil has a bad ear, or is grown up. Young pupils, who have tolerable correct ears, will not want it ſo much. PORNY'S *Syllabaire François*, (price 1s. 6d) is the beſt adapted book for the purpoſe.

In teaching to read the French language correctly, there are ſome general rules that I have been in the habit of impreſſing ſtrongly on my pupils, and the fewer and more comprehenſive the teacher makes his rules, the better will they be retained, and the greater their effect: variety of minute rules only ſerve to perplex.

1. Whenever a word begins with a vowel, or an aſpirated *h*, the *laſt* letter of the *preceding* word muſt always be pronounced full; as, *quand on a tout avalé*, muſt be read *quant onn a toute avalé*, inſtead of *quan ong a tou avalé*.

Here the *d* in *quand* is changed into a *t*, from its being followed by a vowel, and the word *ong* is read *onn*, from the ſame cauſe: the word *tout*, from the ſame reaſon is alſo read *tuut*.

2. The accent over the laſt letter of a word, eſpecially if it is an *é*, cauſes the letter to be ſounded full, as in *avalé*, which, without that accent, would be ſounded *avall*, but with it is pronounced *avalé*, like the Engliſh *a*.

3. The diſtinction between the participle of the verb, and the third perſon plural of the preſent of the indicative, I have always found to be a great ſtumbling-block to beginners, as in the words *diſtinguant* and *diſtinguent*; the former of which, the participle of the verb, is pronounced *diſtingong*; and the latter, the third perſon plural of the preſent of the indicative, is pronounced *diſtingg*; or, in few words, tell the pupil that the *nt* in the laſt is omitted, and that the *e* and the *a* makes the diſtinction between the two.

4. A

4. A *z* at the end of a word is never pronounced; as, for *rendez*, *donnez*, read *rendé*, *donné*.

5. *Oit* and *ois* at the end of a word, is always pronounced as *a* in Engliſh; for inſtance, *il donnoit* is read *il donné*; but if a vowel follows, the *t* is pronounced.

6. The *s*, at the end of words, is not often pronounced, except a vowel follows, as in *complimens*, *leurs*, read *compliment*, *leur*.

7. The word *foible* is pronounced like the Engliſh word *fable*, and *roide*, *roideur*, like *rade*, *radeur*.

8. The letters *oi* are ſounded as *oa* in French; as, *croitre*, *croatre*; *roi*, *roa*; *moi*, *moa*.

9. The *g* before an *n* is not ſounded; as in *regner*, pronounced nearly as *raynié* in French; *ignition*, pronounce *iynnition*; *inexpugnable*, pronounce *inexpoonyable*.

10. A *ç* with a crotched, called the *cedilla*, under it, is always pronounced *s*; as in the word *ça*, *hither*, it is read *ſa*; *arçon*, read *arſon*; *François*, read *Franſé*.

11. The maſculine article *un*, is always pronounced *ung*, except a vowel follows it, then it is pronounced *une*, as the feminine article is.

12. The word *bon* is ſounded *bong*, except a vowel follows it, then it is pronounced *bonn*; remark that an aſpirated *h* is generally

rally entitled to the ſame diſtinction as a vowel.

13. *Eux*, at the end of words, is pronounced *eu*, the *x* being omitted, except when an *h* or a vowel follow, and then it is pronounced *s*.

14. The ſyllables *peu* and *feu* are very apt to be improperly pronounced by pupils; they ſound them as *pou* and *fou*; they ſhould be taught to diſtinguiſh them with nicety.

15. The words *cœur*, *mœur*, &c. are alſo generally pronounced wrong, by beginners, *cour*, *mur*: the diſtinction muſt be properly explained to them.

16. The words *faim*, *daim*, *eſſaim*, and many others terminating in *aim*, are pronounced *fin*, *din*, *eſſin*, &c. the *aim* being changed into *in*: *nam*, *parfum*, &c. are alſo ſounded *non*, *parfun*.

17. The ſyllable *ait*, as in the third perſon ſingular of the preſent indicative of the verb, is pronounced *ai*, the *t* being omitted; as, *hait*, *plait*, is read *hai*, *plai*.

18. The word *eſt*, the third perſon ſingular of the preſent tenſe of the indicative of the verb *etre*, to be, is always pronounced *a*, as in Engliſh, except a vowel follows it, and then it is pronounced *et*.

19. *And*, *end*, *ond*, at the end of words, omit the *d*.

20. *Lle*

20. *Ller* is founded *llier*, as in *piller*, *griller*; *llon*, *llion*, as in *papillon*: in ſhort, where two *l*'s meet, they take an *i* after them.

21. *Geons* is pronounced *jongs*, as in *mangeons*.

22. The words *habillé*, *héroïne*, *hiſtoire*, *homme*, *humilié*, omit the *h*, being mute, or not aſpirated. In the words *hâillon*, *héros*, *hideux*, *hurlant*, the *h* is aſpirated, and therefore pronounced full.

23. *Ant*, at the end of a word, makes *ang*, the *t* being omitted, as in *enfant*, *demandant*.

24. *Cet* and *cette*, are ſometimes pronounced *ſt* and *ſte*; as, *cet homme*, *cette femme*, pronounce *ſt homme*, *ſte femme*, very ſhort.

25. The *y* is pronounced like the Engliſh *e*.

26. *Ier*, at the end of words, omits the *r*, except a vowel follows.

27. *Ieux*, at the end of words, omits the *x*, and the *x* is often pronounced like a *z*; as in *ſix jours*, pronounce it *ſiz jours*; *dix ans*, pronounce *diz ans*, &c.

28. The words *paon*, *faon*, *laon*, are pronounced *pan*, *fan*, *lan*; that is, the *o* is omitted.

29. *Saoul*, *aout*, omit the *a*.

30. *Auteur*, *beau*, are pronounced *oteur*, *bô*.

31. *Oei*, in *oeil*, *oeillade*, *oeillet*, founds like *eu*; *vœu*, *bœuf*, are pronounced *veu*, *beuf*.

32. *François*, *Anglois*, *Ecoſſois*, *Irlandois*, and *Hollandois*,

Hollandois, change the dipthong *ois* into *a* Engliſh.

33. *Oitre* is pronounced like the word *etre*, in French; as in *connoître*, *paroître*.

34. When there are two or three conſonants at the end of a word; as in *canard*, *corps*, *rompt*, &c. followed either by a ſtop, or a word beginning with a conſonant, the firſt of them is only to be uttered.

Theſe rules, or any others of the ſame nature the teacher may chuſe to add, ſhould be perfectly learnt by heart by the pupil at the time he is beginning to read; three at once, till the whole are compleatly gone through, and ſtrongly impreſſed on the memory, will be ſufficient for a leſſon; but I would recommend that they ſhould be got by heart at all events, let the teacher effect it as he will. For a more compleat *praxis* on the formation of French ſounds, I refer the reader to *Porny*'s Grammar, pages 45 and 46.

Monſ. Texier's *Art de bien lire*, (price 5s.) will be found very uſeful to teachers at this period.

The next ſtep is the Grammar and Vocabulary of the language, which may be learnt at the ſame time, a little of each at one leſſon. As I have before obſerved, the greater number of words the pupil has ſtored up in his memory, the greater will be the facility with which he will

will begin to tranſlate; it will be in exact proportion to his acquirement of the Grammar and Vocabulary. I believe Porny's, Palairet's, and Rogiſſard's, are the beſt grammars.

The pupil ſhould now, alſo, be acquainting himſelf with the parts of ſpeech, and occaſionally parſe two or three lines to his maſter.

In Porny's *Syllabaire*, before mentioned, a very good Vocabulary will be found; and ſome familiar dialogues, alſo, for practice.

The verbs form the greateſt difficulty to beginners, from their uncommon variety in the French language, and more than uſual pains muſt be taken to acquire them perfectly. Porny has arranged them very clearly, and added a praxis upon each ſpecies.

The pupil ſhould then proceed to *grammatical exerciſes*, a very good guide for which he will alſo find in Monſ. Porny's Publication, under that name (price 1s 6d), in which all the rules of French ſyntax are applied in every part of its conſtruction, digeſted in a plain, eaſy, and progreſſive order.

Chambaud's Exerciſes, and the new arrangement of them, by Mr. *Satis*, will alſo be found very uſeful to the pupil at this period.

In beginning to tranſlate, the teacher ſhould point out to the pupil thoſe particular words which are moſt frequently occurring in the courſe

courſe of common reading, and alſo thoſe little expletives which are of greater conſequence than is generally imagined; he ſhould always be made to read to a full ſtop, or a colon, before he attempts to tranſlate, that he may, with more eaſe, catch the general ſenſe of the ſentence.

There are a few words which are of great import in a ſentence, but are not ſo nicely inculcated upon learners as they ought to be, ſuch as *y*, there; *en*, of it; *dont*, of which; *on*, they, or the people.

There are, alſo, ſome peculiar idioms and expreſſions which are frequently occurring, and ſhould be carefully ſelected, by the teacher, for the pupil's particular notice and recollection; indeed, they ſhould be got by heart; as for inſtance:

Sur le champ, immediately.
Tout à l'heure, directly.
Pour le moins, at leaſt.
Au plus tôt, as ſoon as poſſible.
Au plus vite, with all ſpeed.
A l'avenir, for the future.
A peu près, nearly.
Tout d'un coup, ſuddenly.
A force de, by dint of.
Tant mieux, ſo much the better.
A moins-que, unleſs.
Tant pis, ſo much the worſe.

Tant

Tant ſoit peu, never ſo little.
Tant s'en faut, far from it.
A la bonne heure, well and good, or very well.
Quant à moi, as for me.
Vis-à-vis, over againſt.
Au pis aller, let the worſt come.
De pis en pis, worſe and worſe.
De mieux en mieux, better and better.
Pour le moins, at leaſt.
Touchant cela, concerning that.
De crainte que, leſt, or for fear that.

Examples of the Particle ON.

On nous a dit que, *we have been* told that.
On aime à parler, *people like* to talk.
On dit, *it is ſaid.*
On l'a accuſé, *he has been* accuſed.

The Particle Y *exemplified.*

Y eſt-il? is he *there?*
Ne vous *y* fiez pas, don't truſt *to it.*
J'y penſerai, I will think *of it.*
Conduiſez nous *y*, ſhew us the way *to it.*

The Particle EN *exemplified.*

En doutez vous? do you doubt it?
Donnez *m'en* trois, give me three *of them.*
Achetez-*en*, buy *ſome.*
Elle *s'en* fera gloire, ſhe will take a pride *in it.*
Qu'*en* dites vous? what do you ſay *to it?*

The

The Particle Y *and* N *exemplified.*

Y en avez vous mis aſſez? have you put enough *of it there?*

Envoyons-*y-en*, let us ſend *ſome there.*

J'y *en* mettrai davantage, I will put ſome more *to it.*

I would recommend *Hudſon*'s Fables as the book that ſhould be put into the Pupil's hands for his firſt attempt in tranſlating, as it is eaſy and amuſing, contains ſome very uſeful matter beſides the fables, and has a ſmall dictionary at the end, of the words that occur in the work, and their ſeveral parts of ſpeech alſo annexed to them.

The pupil ſhould, at firſt, have ſome little aſſiſtance or guide, till, by degrees, he is able to do without it, and I conſider the above as the beſt of the kind for that purpoſe: a good *Recueil* of proſe and poetry might then follow Hudſon's Fables.

To this may ſucceed Telemachus, and the Hiſtory of Charles XII. of Sweden, by Voltaire; Boyer's Dictionary being uſed to aſſiſt the pupil's progreſs.

Gil Blas, Don Quixote, Le Diable Boiteux, Rollin's Ancient Hiſtory, and any other good proſe works the teacher may ſelect, may then be read: but I cannot omit this opportunity of ſtrongly recommending Les Voyages de Cyrus.

To

To follow them, I would recommend Moliere's Comedies; ſome of Voltaire's and Racine's Works, Corneille's, or any other that the teacher may think fit, or the pupil fancy; for a little attention muſt always be paid to the latter's choice, where it is not contrary to decency and propriety.

In the mean time the pupil is, of courſe, making ſome progreſs in ſpeaking French, which cannot be acquired without much pains on his own part, and *conſcientious* attention on that of the teacher; the former by unremitting application to the Vocabulary, phraſes, and dialogues, and the latter by making it a conſtant practice to talk to him in French, ſeeking all opportunities of introducing the uſe of that language to him, and carefully correcting his errors both in ſpeaking and reading, pointing out to him the amendments that ſhould be made as to idiom, elegance of expreſſion, and exactneſs of pronunciation.

It is a good method uſed in many ſchools, to make the pupils converſe conſtantly in French, whether in or out of ſchool hours, by means of a *mark*, which being called for by the maſter at certain hours, makes the holder of it obliged to pay a penny, or more, every time; the money ſo collected, being applied to purchaſe prize books, or other rewards, for thoſe, who, at the quarter or half year's end, are found, by a fair

competition, to have the moſt merit in their exerciſes or themes; and if the ſame kind of *check* was inſtituted in ſchools for Engliſh only, (and in day-ſchools in particular,) for falſe grammar, vulgariſms, bad pronunciation, &c. I think it would have a very good effect.

It is highly neceſſary that the pupil ſhould be conſtantly in the habit of writing tranſlations, by way of exerciſe, and a page every day ſhould be the leaſt quantity. I have ſeen a very good purpoſe anſwered, both as to hiſtorical improvement, and accuracy in tranſlating French, as well as making Engliſh into French, by giving the pupil the abridgement of Rollins's Ancient Hiſtory, making him write the tranſlation of a page every day into Engliſh; and the next day previous to your correcting his uſual portion, hearing him *vivâ voce* make the tranſlation of the preceding day into French again, from memory. I recommend this as an excellent method, care being alſo taken that the tranſlations are corrected with *red* ink, the better to diſtingniſh the errors.

It is alſo a very good plan that is uſed in ſome ſchools, to make the more advanced pupils compoſe an Engliſh commercial letter, and a theme, once a week; ſuppoſe Tueſday; and by Friday to have them tranſlated into French, ready for correction; it following, of courſe, that the Engliſh maſter has previouſly examined them

them on the Tueſday, and corrected, as well as amended, the compoſition.

I would very ſtrongly recommend to the teacher's attention, Porny's *Models of Letters* (price 4s.) on various ſubjects, in French and Engliſh, as they are extremely well calculated for the inſtruction and improvement of thoſe, who are deſirous of acquiring the true ſtyle and exact manner of French epiſtolary correſpondence.

There is alſo another work, which it occurs to me as likely to be of infinite ſervice to young people who have made ſome progreſs in the French language, and that is, the *Abbé Vertot*'s Hiſtory of the Revolutions in *Sweden*, in which the patient perſeverance, magnanimous character, and ſingular adventures of the great Guſtavus Vaſa, in the mines and mountains of Dalecarlia, are ſo intereſtingly deſcribed, that the work cannot fail of attracting the ſpontaneous attention of the more advanced pupil, if it is put in his way; for even at that period of education, I would not *force* any particular books upon my ſcholars, or endeavour, as we vulgarly ſay, to cram my own opinions or ideas down their throats. Give them an opportunity of ſeeing uſeful books, and they will, of their own accord, wiſh to read them.

I recollect that the above work being mentioned to me at fourteen years of age, I read it

with as much avidity as if it had been a firſt rate novel; indeed, I found it ſuperior, in every reſpect, to any traſh of that deſcription; and I ſincerely wiſh that the early impreſſion the character of that perfect hero made upon my mind, had never been obliterated in after-life. The character of Charles XII. by Voltaire, had a different kind of effect on my mind; but even that is an attractive work for youth.

CHAPTER

CHAPTER V.

SECT. I.

Merchants' Accompts, or *Book-keeping.*

THE ſcience of book-keeping is of ſuch importance in this commercial country, that it neceſſarily forms an eſſential branch of education; but it is rather unforunate that the theory of the art, as it is taught in ſchools, differs ſo much both from the theory and practice of merchants' counting-houſes, that no certain rule can be laid down to guide the pupil by, and the rather ſo, as almoſt every merchant or tradeſman has, more or leſs, a different method of keeping his books.

There is alſo a ſtill greater diſadvantage attends pupils who are taught this ſcience in academies, eſpecially in the country; which is, that their teachers have never been accuſtomed to the practice of it in a counting-houſe, and, conſequently, cannot give them that compleat idea of the art which they otherwiſe ought. There are, however, ſome of our town finiſhing academies, where there are better opportu-

nities of acquiring a tolerable knowledge of it, from the acceſs that the maſters and teachers have to counting-houſes, and the means of procuring the various forms uſed in them, as well as mercantile information in general.

Had I a ſon, and wiſhed to have him inſtructed in merchants'-accompts, I ſhould certainly endeavour to make it worth while to ſome experienced clerk in a merchant's counting-houſe, to give him two or three leſſons a week, on principles founded upon his actual daily practice, and without making any of the ſchool authors on the ſubject his guide.

I never yet knew a pupil who had learnt book-keeping at ſchool, but who complained, after he had been ſome time in the counting-houſe, that the practice there was totally different from any thing he had been taught; and this circumſtance (which I believe is pretty generally known to be the fact) has ſometimes led me to think, that the preſent treatiſes uſed in ſchools are inadequate to the purpoſe; and the rather ſo, as they are drawn up by perſons who have been brought up *teachers*, and not *clerks*.

How far I may be right in this opinion, or how far any thing that I can ſay on the ſubject, in the ſmall compaſs permitted me in a general work of this kind, may be ſufficient to give a clearer idea of the practical part of the ſcience, it is not my buſineſs to decide; however, as I have

have both learnt and taught the theory of it, and have, beſides, had ſome conſiderable practice in two reſpectable counting-houſes, probably upon thoſe grounds I may venture to aſſume the hope, that what I have to obſerve on the ſubject, will not be altogether fruitleſs.

I am acquainted with the maſter of a very eminent academy, who is about to publiſh a new treatiſe on Book-keeping, principally founded upon actual forms and documents procured from one of the firſt counting-houſes in the city. I have not a doubt of its being ſuperior to any thing yet publiſhed on the ſubject; and I mention it in this place, becauſe I would adviſe every teacher, as much as poſſible, to procure an inſight into the actual practice of counting-houſes, and make uſe of thoſe original forms and documents, which, if he has any mercantile acquaintances, he will be at no loſs to procure.

Within the laſt five years, there have been ſeveral plans ſubmitted to the mercantile world, for an improvement in the practice of book-keeping, the moſt prominent of which are Mr. Edward Jones's, of Briſtol; and Mr. Joſhua Collier's, of London: with reſpect to the former, though his *Engliſh Syſtem of Book-keeping*, as it was termed, was very much countenanced at firſt; yet, as far as I can learn, very few merchants or tradeſmen have adopted it in their

counting-houſes; and it ſeems now to be conſigned to oblivion, though I believe, upon the whole, it was not without its merit.

Mr. Collier's, which is founded upon his own actual and long experience in a reſpectable line of buſineſs, as well as on the moſt perfect mercantile knowledge, with the accompanying advantages of a very liberal education, a turn for mechanical invention and mathematical preciſion, is, in my opinion, the beſt; he has not attempted, like Mr. Jones, to do away the Italian method of double-entry, but only to improve the mode of keeping the Waſte-book and Journal, principally the latter; and to form one ſtrong check for both ledger and journal, of which I ſhall have occaſion to take notice hereafter.

I have ſeen and examined all the various ſyſtems to which Mr. Jones's has given riſe; I have alſo peruſed the principal ſchool authors on the old ſyſtem, but I find nothing that has met my own ideas of the ſubject, equal to Mr. Collier's; and I can ſpeak with the more authority on the ſubject, having been for ſome time his clerk, and kept his books upon this improved plan of his own; and as he has publiſhed the outlines of that plan, there can be no impropriety, I think, in my introducing the particulars of it in this work, as an improvement in the ſcience of book-keeping, uſeful to

be

be communicated to teachers and ſchool youth deſigned for the counting-houſe.

But before I proceed to make any remarks on the ſubject, it may be proper juſt to ſtate, in a few words, for the ſake of thoſe who may not be ſo well acquainted with the nature of it, what book-keeping is, what are the principles on which it is conducted, and what the different books made uſe of in merchants' counting-houſes for that purpoſe.

MERCHANTS' ACCOMPTS, or the art of book-keeping, is a methodical way of recording the tranſactions of the man of buſineſs, enabling him, at any time, to aſcertain not only the ſtate of every perſon's account with whom he has any concern or connection in trade, but alſo the true ſituation of his own affairs.

There are two principles upon which it is practiſed or conducted; *viz.* *Single-Entry*, and *Double-Entry*.

Book-keeping by double-entry, is ſimple and eaſy to be underſtood, as it conſiſts only of a plain ſtatement in the day-book, of every tranſaction that occurs in the courſe of the day, and which from thence is poſted into the ledger, to the *debit* or *credit* of the perſon's account it happens to belong to.

This principle is not ſo certain, however, as that of double-entry, as there is not ſuch a ſufficient check to detect errors; for if ten pounds

in

in the day-book ſhould be entered ten ſhillings in the ledger; or if one thouſand pounds ſhould be poſted one hundred pounds, they *may*, in ſingle-entry, remain undiſcovered; but in double-entry they cannot. No man in trade, keeping his books by ſingle-entry, can aſcertain, from the day-book, the amount of all his tranſactions, debits and credits, and that the whole of thoſe amounts were correctly poſted into the ledger.

Double-entry in book-keeping, means, that for every twenty ſhillings, or any greater or leſs amount entered to the debit (or on the debtor ſide) of any perſonal account, there muſt be the ſame amount entered to the credit (or on the creditor ſide) of ſome other perſonal or nominal account; and that for every twenty ſhillings, more or leſs, entered to the credit (or on the creditor ſide) of any perſonal account, there muſt be the ſame amount entered to the debit (or on the debtor ſide) of ſome other perſonal or nominal account: and theſe entries are poſted into the ledger, from the journal, to the debit or credit of the ſeveral accounts to which they relate.

On this plan an error cannot well go undetected, as the debtor and creditor ſides are checks upon each other; except, indeed, it is a wilful and intentional error to anſwer any fraudulent purpoſe of the book-keeper's, or his employer's,

employer's, and ſo ſkilfully managed as to elude even ſuſpicion itſelf. There is no ſyſtem abſolutely perfect: but where book-keeping by double-entry is made uſe of with honeſt intentions, it appears to me to be the moſt certain and effectual method yet diſcovered.

A *trial balance* is generally made, once a year in counting-houſes, to ſee if the books are accurately poſted; and that is done, by taking off the balance of each account in the ledger. If the amount of theſe balances, on both the debtor and creditor ſides exactly agree, the books are conſidered as right; though, as I have before obſerved, it is poſſible a wilful and well concealed error may eſcape detection: but what ſyſtem could there be invented ſo perfect as to guard compleatly againſt the very perſon who keeps the books, if he is fraudulently inclined?

The books made uſe of in the proceſs of keeping merchants' accounts, are,

1. The Day Book, Diary, or Waſte Book.
2. The Journal.
3. The Ledger.
4. Several ſubordinate books; ſuch as the
   - Caſh Book.
   - Bill Book.
   - Book of Houſe Expences.
   - Order Book.
   - Letter Book.
   - Receiving Book.

Delivery

Delivery Book.
Acquittance or Receipt Book.
Sale Book.
Book of Charges on Goods.
Invoice Book.
Factorage Book.

The titles of theſe books explain their own nature; and they vary more or leſs in number in counting-houſes according to the nature and extent of the buſineſs carried on. For a fuller explanation of them I refer the reader to Dilworth's Book-keeper's Aſſiſtant.

In *ſingle entry*, the firſt thing neceſſary to be done, is to ſtate, in a DAY-BOOK, a true account of the ſtock or property with which the merchant begins trade; and, after that, regularly to enter every tranſaction as it occurs, that produces any alteration in his property, either by the ſale or purchaſe of goods, by the payment or receipt of money, or any other circumſtance for which he is liable to be indebted, or that he has a right to charge to the debit of any perſonal account: and as there cannot exiſt any tranſaction but it muſt be placed to the debit or credit of ſome perſonal account, it is only neceſſary to aſcertain whether the tranſaction belongs to the debit or credit of the perſon's account, with whom it occurs; the nature of it, or of what it conſiſts, and its value or amount, and then to make a plain

plain and correct ſtatement of it in the day-book, ſuch as may be clearly underſtood.

The WASTE-BOOK, in *double entry*, contains a plain narrative of facts, entered at the inſtant of any occurrence in buſineſs, (for the merchant or book-keeper never truſt to *memory* in their tranſactions,) affecting either ſide of any account; or if the tranſaction happens out of doors, it is recorded in a memorandum-book, and when the merchant returns home, is from thence tranſferred to the waſte-book. It is not abſolutely neceſſary that any thing more ſhould be done to theſe entries for a month together, at the end of which all the particulars would be then before him, and as it were freſh in his memory. I allude to the poſſible circumſtances of being from home, confined by illneſs, or without a clerk.

In this book it is not neceſſary to have a column for the ſums, as it would frequently occaſion the leaving long blanks, or cramp the book-keeper in his language, which ſhould be perfectly eaſy to be underſtood.

In theſe entries very few merchants make references to bills of parcels, books, and the various documents of a counting-houſe, as they are always preſumed to know the regular forms of buſineſs, and the means of elucidating their own accounts.

What is moſt important, and eſpecially to young traders, is to leave no entry unpaſſed to a future

future opportunity; minutes ſhould be carefully made of every occurrence at the moment, and as carefully reviſed in the waſte-book while freſh in the memory. This is the great book of record, and the form or arrangement of the others is comparatively immaterial.

The JOURNAL is the book into which the entries from the waſte-book are tranſcribed, in ſuch a conciſe, clear, compact, and methodical form, diveſted of all ſuperfluous matter, as to mature them for *poſting*, as the carrying the ſeveral particulars of them to their appropriate heads of accounts in the ledger, is termed. In journalizing well the chief art of book-keeping conſiſts; and it is proper that whoever in a counting-houſe undertakes this department, ſhould be, at leaſt, a ſteady perſon of plain underſtanding.

The LEDGER is that book in which the man of buſineſs opens an account with every perſon of whom he buys goods, or receives money; ſells goods or pays money to, *&c.* ſelecting from the journal, and poſting to its relative account in the ledger, the date and amount of each tranſaction. By this means the ledger will always contain the contents of the day or waſte-book, and journal, though arranged in different order; ſo that not only the whole ſtatement of any perſon's account may be ſeen at one view; but from it may alſo be produced, with the addition

dition of the ſtock of goods in hand, the whole ſtatement of his affairs; ſhewing, at the ſame time, the profit or loſs of his trade. There are two ſides to each account, the left-hand is the *debtor* ſide, and it is headed with the name of the party, or whatever article of merchandize the account alludes to: the right-hand is the *creditor* ſide, and has the words *per contra* (meaning, in Engliſh, on the other hand, or oppoſite to) ſubſtituted inſtead of the name, *&c.*

Such is the intention and proceſs of book-keeping.

Some merchants do not make uſe of a waſte-book at all, but immediately journaliſe all their tranſactions; others uſe only the waſte-book and ledger. Mr. Jones's plan confines the proceſs to a diary and ledger only, and without any caſh-book, and in all counting-houſes they vary, more or leſs, in the number of principal and ſubordinate books which they keep. By Mr. Collier's plan, both the bill-book and caſh-book are unneceſſary.

The methods of arranging and claſſing the various ledger accounts, are alſo very different in counting-houſes, according to the ſeveral ſpecies of trade merchants are engaged in, and the nature of the other books they keep.

In teaching merchants' accounts in academies, or to private pupils, after deſcribing to them in general the principles of the art, the nature of

of the ſeveral books kept, and the circumſtance of their varying in name and in the method of keeping them in different counting-houſes, according to the ſeveral ſpecies of buſineſs carried on, I would endeavour to make them comprehend clearly the fundamental principles of the art, in ſome ſuch way as follows, and afterwards practiſe them on the plan hereafter mentioned, for teaching it in ſchools.

1. If you carry money into trade, begin your *waſte-book* with an account of the amount of it, and the debts owing to and by you; and if it is a working or mechanical concern, the value of your utenſils and other articles which relate to the trade you are engaged in, whether it be that of a brewer or ſugar-baker, or an improved ſtove manufacturer. This account you are to head in the ledger, with your name, or under the title of STOCK; the latter is the moſt generally uſed.

In the *journal*, you will make ſtock creditor for the amount, and debtor for what you owe: ſo that in the ledger your debts will ſtand on the debtor or left-hand ſide of the ſtock account, and your money, and value of the utenſils put into trade, on the creditor or right-hand ſide of the account titled *per contra*.

2. If

2. If you *pay* money away, make the caſh account creditor for it, and the perſon's account to whom you pay it, debtor, not only for the money you ſo pay him, but for any diſcount or abatement he may allow; and as the teacher goes along, he ſhould not let the opportunity ſlip of informing the pupil what diſcount and abatement mean.

3. If you receive money *credit*, the perſon of whom you receive it, not only for what money he pays, but alſo for any diſcount or abatement you may allow, and *debit* your caſh account for the nett amount received. Generally ſpeaking, whenever you receive, you are to write yourſelf debtor, and creditor when you pay.

4. If you buy goods, give the perſon credit of whom you purchaſe them.

5. If you ſell goods, debit the perſon to whom the ſaid goods are ſold.

6. If you receive empty caſks, tubs, utenſils, or any other deſcription of articles not your own, make ſtock debtor for them.

7. If you lend caſks, or any other articles or utenſils, make ſtock creditor for them.

8. If you keep an account with a banker, whenever you give a *check* upon him, make him creditor for the amount, and the perſon to whom you give it, debtor.

9. If you pay money into your banker's, make him debtor for the ſame, and caſh creditor for it.

10. If you give a note or bill, make *bills payable* creditor for the amount, and the perſon to whom you give it, debtor.

11. If you receive a bill or note, make bills payable debtor for the amount, and the party of whom you received it, creditor for the ſame.

12. If you pay a bill when due, credit caſh for the amount, and debit the party's account to whom you gave it, for the ſame amount.

13. If you receive caſh for a bill, when due, of which you are the holder, debit caſh for the ſame, and credit the perſon's account of whom you had it, for the amount.

14. If you borrow money, make caſh debtor for the amount, and credit the perſon you borrowed it of for the ſame.

15. If you lend money, make the party you lend it to debtor for the amount, and credit your caſh account for the ſame.

16. If you pay money for poſtage and petty expences, make caſh creditor for the ſame, and ſundry accompts, debtor.

17. If you pay money for houſe expences, credit caſh for the amount, and make houſe expences debtor for the ſame.

18. If

18. If you gain by the ſale of any article, make profit and loſs debtor for the amount, and the article ſold, creditor for the ſame.

19. If you loſe by an article, make profit and loſs creditor for the amount, and the particular article debtor for the ſame.

20. If you buy any utenſils, or other articles uſed in your trade, credit caſh for the amount, and make ſtock debtor for the ſame.

21. If you diſcount a bill with the bankers, make caſh or the bankers debtors for the amount ſhort of the diſcount, and bills payable, creditor for the full amount of the bill, debiting your intereſt account for the diſcount, and *vice verſa* if you are the diſcounter yourſelf.

22. If you are in partnerſhip, you and your partner muſt each have a ſeparate account in the ledger, and when either of you draw money, you muſt debit your particular account for the ſame, and make caſh creditor; and when you divide the profits at any particular period, *credit* both your ſeparate accounts for the half profits.

For further inſtructions in theſe ſtatements, I refer the reader to Dilworth's Book-keeper's Aſſiſtant, at the concluſion.

Care ſhould be taken in theſe entries, to have nothing myſterious or obſcure, but merely a

plain narrative of the fact, without introducing a ſingle uſeleſs word, or making uſe of technical terms or phraſes, except the words *debit* and *credit*, which are full and comprehenſive, and the only terms that are applicable to every tranſaction, and may be affixed to every entry. The articles on the debit ſide are preceded by the prepoſition *To*, and the articles on the credit ſide, by the prepoſition *By*.

Theſe are the fundamental principles to be taught in ſchools, and, by practiſing the entry of examples ſet them by the teacher, upon each rule, into the waſte-book, journal, and ledger, the pupils will ſoon acquire all that they need to learn of the ſcience before they go into counting-houſes, as the practice there differs ſo much from the theory of ſchools, and authors who have publiſhed on the ſubject, that they will rather acquire prejudices and confuſed habits, than any uſeful knowledge in the art.

The nature of the trial balance and final balance, at the year's end, may be properly explained to them and practiſed; that proceſs is the ſame in all counting-houſes, and cannot vary much.

It might be a uſeful plan in ſchools, to make the pupils *practiſe* the buſineſs of book-keeping in the following kind of way, after they have made themſelves maſters of the twenty-two general

neral rules I have laid down, which ſhould be got by heart.

Let articles of entry be written on ſlips of paper by the teacher, and the pupils who are learning merchants' accounts nominally enter into trade, a ſuppoſed capital being firſt advanced and entered in the waſte-book. Then let the pupils go to their teachers or ſchool-fellows, and buy thoſe articles in which they are to trade, and which they ſhould receive written on pieces of paper, and ſell again to other boys in like manner, regularly entering in the waſte-book every tranſaction as it occurs, making and receiving regular payments, ſometimes in caſh, ſometimes in drafts, and at other times in bills or notes of hand.

The teacher ſhould alſo make them ſometimes receive and allow diſcounts and abatements, receive and give bills of parcels, and, in ſhort, omit no occurrence that is plain and eaſy to be underſtood, which can happen in trade. Great care ſhould be taken to explain the nature of the different tranſactions, ſo that the pupils may perfectly comprehend them.

I think, alſo, that a very particular attention ſhould be paid to the grounding them well in the arithmetical rules of exchange, intereſt, rebate and diſcount, profit and loſs, barter, *&c.* as the thorough knowledge of them is indiſpenſible to a good clerk.

The teacher might alſo practiſe a whole claſs in the following way.

Set the pupils down with their waſte-books, read over to them aloud, ſome tranſactions previouſly conſidered and committed to paper by yourſelf, for them to *enter*, *journaliſe*, and *poſt* into rough books, to be afterwards copied fair. Give them three or four minutes between each tranſaction, that they may have time to reflect how to enter it. When all have done, take that pupil's waſte-book which you have reaſon to think is the moſt correct, and alter any thing that he has done wrong; then let every boy change books with his neighbour, and while you read the amended entries to them aloud, let every one correct his neighbour's waſte-book by them, marking the number of errors at the bottom of the page, by which you will the better obſerve their progreſs, every one's amount of errors being entered in a book kept for that purpoſe, as I have deſcribed under the head of Reading; and if you think fit to propoſe rewards for the beſt, and forfeits for the worſt, it would have the better effect.

This plan would ſave teachers a great deal of trouble, and be the moſt effectual way I know of inſtructing their pupils with preciſion.

I would give them blank books (common copy or exerciſe paper ſewed together, with a cartridge-paper cover, would do for this practice,)

tice), and make them rule them themſelves from a pattern waſte-book, journal, and ledger, ruled by the teacher. This will be of much ſervice to them.

I ſhall now proceed to deſcribe the improved method I alluded to for arranging and keeping the journal, which, from having myſelf practiſed it in a counting-houſe, I can ſay, with certainty, will ſave a great deal of unneceſſary trouble in poſting, enſure preciſion in the detection of errors, and, at the ſame time, preſerve all the explicitneſs of the old method.

I muſt firſt premiſe that every entry in the WASTE-BOOK is *numbered*, running from No. 1, to No. 500, or upwards, as well as the day of the month prefixed to it.

EXAMPLES.

WASTE-BOOK.

Date 1800			No.
Jan.	1	Bought of John Davis, 12 cwt. of ſugar, and paid him for ſame by check, 58l. 16s. 4d.	1
	3	Sold Thomas Smith 5 pipes of wine, and received for ſame, caſh 250l.	2
	5	Borrowed of Wm. Johnſon 450l.	3
	7	Paid Sam. Day half a year's rent, due at Chriſtmas, caſh 18l. 10s.	4
	8	Bought of Iſaac Mendez, 12 pipes of oil, for amount of which gave him a check 360l.	5

JOURNAL.

The accounts in the JOURNAL to which the columns are applied, that I am about to deſcribe, are thoſe which are moſt frequently occurring, and theſe may be varied according to the nature of the buſineſs the party is engaged in; for inſtance, a factor might add one for *commiſſion*.

JOURNAL.

	Dr.			Cr.			Dr.			Cr.		
Date 1800	Caſh	Banker	Goods	Goods	Banker	Caſh	Page in Ledger	Sums poſted	Ledger Accounts	Subject Matter	Sums poſted	Mark of Poſting	No. of Entry in Waſte Book.
Jan. 1					58 16 4			58 16 4	Sugar	Bought of Davis 12 cwt.		L	1
3	250 0 0								Wine	Sold Smith 5 pipes	250 0 0	L	2
5	450 0 0								W. Johnſon	Borrowed of him	450 0 0	L	3
7						18 10 0		18 10 0	Charges.	Paid Day ½ a year's rent		L	4
8					360 0 0			360 0 0	Oil	Bought of J. Mendez 12 Ps.		L	5
	700 0 0				418 16 4	18 10 0		437 6 4			700 0 0		

The reader will obſerve, that the dates and correſponding numbers of the examples of entries in the waſte-book, are placed differently to what the dates and pages are in the old ſyſtem, and that there are no columns for the amount; but I muſt remark to thoſe who are attached to the old plan, that this alteration may or may not be adopted, juſt as they think fit, though certainly with reſpect to numbering the entries, it is a manifeſt improvement as a ſtrong check.

The reader will alſo remark, that in the arrangement of the columns in the journal, after the firſt for the date, there are *three* for *caſh*, *banker*, and *goods*, Dr.—and *three* more for *caſh*, *banker*, and *goods*, Cr.;—and that after the eighth column, which is for the page in the ledger, there are two columns for the ledger accounts, (ſo termed to diſtinguiſh them from thoſe that do not go into the ledger, but are kept by means of the journal only, ſuch as the banker's and caſh account), and the particular ſubject matter of them; and on each ſide of them, is another column, entitled *ſums* poſted Dr. and Cr. the debtor column, 437l. 6s. 4d. exactly balancing the three creditor columns, goods, banker, caſh, if added together. The amount of ſums poſted Cr. muſt alſo agree exactly with the amount of the *three* firſt or Dr. columns, caſh, banker, goods, *viz.* 700l. which it does.

The

The mark of poſting in the ledger then follows, and then the *number* of the entry in the waſte-book, which is alſo carried from the journal to the ledger.

The advantage of arranging the journal in this way is, that at the bottom of every page or folio, you can make a trial balance, by adding up the ſeveral Dr. columns, and ſeeing if they agree with the amount of the ſums poſted Cr. and *vice verſa* the Cr. columns, with the ſums poſted Dr., in which caſe they are right: but this is not the only advantage, for by referring to any particular column, ſuch as the caſh or bankers, and adding the Dr. and Cr. you can aſcertain how your account with your bankers, or your caſh account ſtands: by this means the journal anſwers all the purpoſes of a caſh and banker's book, and if you chuſe to add two other columns for bills payable, and bills receiveable, it will alſo anſwer the purpoſe of a bill-book, and you will have all theſe three different ſubjects in your view at one glance, without the trouble of referring to three ſeparate books.

Every column in the folio muſt be added up, the total put under it, and carried over to its correſponding column in the next folio, and ſo on throughout the journal, till you come to the period of a general balance, when the columns of the laſt folio being added, if your three

three Dr. columns agree in amount with the three Cr. columns, your JOURNAL is *right*, and if the ledger accounts have been correctly poſted, your ledger *muſt* be right too; if it does not agree with the journal, you muſt examine the ſeparate accounts in the ledger, checking them by the journal, till you diſcover the error.

Again, ſhould the total amount of the columns on one ſide of the journal, be found not to balance thoſe on the other, the miſtake will be eaſily detected, by comparing the ſides of each entry ſeparately.

It may be thought expedient to balance the journal every month, extending the TOTALS in accounts kept for that purpoſe in your ledger, in each of which twelve lines would comprehend the whole of one year's tranſactions: this would probably ſatisfy thoſe who are deſirous that each of the three books ſhould contain a general view of their concerns.

The number of the entry in the waſte-book has the advantage of being a readier way of reference, than the mere page would be; and it is alſo a ſatisfactory evidence, that in journaliſing, no entry has been paſſed unnoticed, the laſt number in each book correſponding.

The columns in the journal for the general account, compriſe the fundamental parts of this ſyſtem, and as many columns may be uſed as you pleaſe; for inſtance, it may even ſuit moſt

retail

retail traders, if a head for merchandize or goods (which would ſerve for *every* article *bought* or *ſold*) were introduced, as I have done, under the title of Goods.

Warehouſemen, or wharfingers, would want one for rent, and another for labour; the latter, poſſibly, one for wharfage, in which might be included landing and ſhipping: a farmer might add one for cattle, and another for grain: thus this mode of entry may be accommodated to any trade whatſoever.

To ſhew the uſe of the columns in the journal; ſuppoſe, when I opened this account, I had 500l. in my banker's hands; by turning to the banker's Cr. column, and adding it up, I find I have drawn 418l. 16s. 4d. ſo that they have a balance in my favour of 81l. 3s. 8d.

Every perſon converſant in book-keeping, muſt perceive the advantage and perſpicuity of this plan; and as I actually kept a ſet of books ſucceſsfully upon it, I can venture to affirm, that it is far preferable to the old ſyſtem in every point of view, and I recommend it accordingly to teachers, who may have Mr. Joſhua Collier's own publication on the ſubject, of Richardſon, Cornhill; or Lackington and Co. Finſbury-ſquare, price 7s. 6d.

SECT.

SECT. II.

Geography and Aſtronomy.

WITHOUT a competent knowledge of geography, neither chronology, hiſtory, nor politics, can be properly underſtood; nor is it poſſible to have juſt ideas either of navigation or commerce; therefore, in this country, it moſt particularly becomes an object of education, and of the teacher's ſerious attention, and ſhould always precede the ſtudy of thoſe ſciences.

It is not my deſign here to enter into a very minute detail of the buſineſs of teaching geography: but merely to throw together thoſe hints which I conceive will enable young teachers to do it with advantage to the pupil, and facility to themſelves.

The ſcience of geography is not difficult, and from its limited nature with reſpect to us, and the extent of our poſſible knowledge of it, is confined within a very narrow compaſs, and therefore the more eaſily and certainly taught.

The learning the figure of the globe, the ſituation and boundaries of the *four* quarters of the world, and that of particular kingdoms and countries, being only an exerciſe of the eyes and

and memory, a child even will learn and retain them with pleaſure.

A boy of ſix years of age may ſoon be taught to know, and readily point out any country on the map or globe, or any of the counties in the map of England, the great rivers, promontories, ſtraits, bays, *&c.* and even to find the longitude and latitude of places.

Theſe things, however, that he may thus learn by ſight, and get by rote, are not all, I confeſs, that he is to learn upon the globes; but ſtill it is a good ſtep towards it, and preparing him in ſuch a way as to make the remainder much eaſier and pleaſanter to him, when his judgment is matured enough for it; beſides, it gains ſo much time now, and from the pleaſure he feels in knowing things of this kind, he is inſenſibly led on to the acquirement of other branches.

The SCIENCE OF GEOGRAPHY chiefly conſiſts in a deſcription of the ſurface of the terreſtial globe, which is naturally compoſed of two parts, *land* and *water*, and is therefore called the terraqueous globe, from the Latin words, *terra*, land; and *aqua*, water: each of theſe elements are ſubdivided into various parts, and are diſtinguiſhed by different names.

The ſtudy of the globe is divided into two parts, the *natural* and *artificial*, or *mathematical*.

The

The firſt thing that the pupil muſt be taught, is the natural diviſion, by which we mean the ſeveral poſitions of the different parts of the earth and ſea, under various names and diſtinctions: there is alſo the political diviſion of the earth, which conſiders it as divided by men into empires, kingdoms, ſtates, provinces, *&c.*

Of the NATURAL DIVISION *of the* EARTH.

Land.	*Water.*
1. Continents.	1. Oceans.
2. Iſlands.	2. Seas.
3. Peninſulas.	3. Bays or Gulphs.
4. Iſthmus's.	4. Streights.
5. Capes or Promontories.	5. Creeks or Sounds.
6. Coaſts or Shores.	6. Lakes.
7. Banks.	7. Rivers.
8. Mountains.	8. Channels.
9. Vallies, Woods, *&c.*	9. Roads.
	10. Harbours.

The *ſecond*, thoſe artificial and imaginary lines which have been invented by mathematicians, and are only *ſuppoſed* for the better improvement of that ſcience: this comprehends the greater and leſſer circles, lines, *&c.* on the globe; *viz.*

Of

Of the ARTIFICIAL DIVISION.

Great Circles.	1. The Equator, or Equinoctial -	1 in number.
	2. The Ecliptic, or Zodiac -	1 ———
	3. The Brazen Meridian -	1 ———
	4. The Wooden Horizon -	1 ———
Leſſer Circles.	5. The Tropicks -	2 in number.
	6. The Polar Circles	2 ———
Other Particulars neceſſary for the Pupil to be acquainted with.	7. The Colures, Equinoctial and Solſtitial	2 ———
	8. The Zones -	5 ———
	9. The Climates -	60 ———
	10. The Hour Circle	1 ———
	11. The Poles -	2 ———
	12. The Axis -	1 ———
	13. The Zenith and Nadir	2 ———
	14. The Quadrant of Altitude -	1 ———
	15. Parallel Circles 16. Meridian Lines	Arbitrary.
	17. Senſible Horizon	1 ———
	18. Circumference and Diameter of the Globe.	2 ———

N. B. The pupil ſhould get the deſcription of theſe by heart, from the PRECEPTOR or GUTHRIE's Geographical Grammar, and in as few words as poſſible, conſiſtent with clearneſs and perſpicuity; indeed, the teacher ſhould write them out for him in his own words.

He

He might then be informed, that the earth is uſually divided into the *eaſtern* and *weſtern* continents, or into the old and new world. In the map of the world, that on the right-hand is called the eaſtern continent, and that on the left, the weſtern continent.

The *eaſtern* continent, or the OLD WORLD, comprehends *Europe*, *Aſia*, and *Africa*. Europe is the N. W. diviſion, Aſia the N. E. and Africa the ſouth diviſion of this continent.

The *weſtern* continent, or the NEW WORLD, contains all America.

He ſhould alſo be informed, that MAPS are plain ſurfaces, deſcriptive of theſe four great diviſions of the earth, and of the ſubordinate empires, kingdoms, countries, towns, villages, *&c.* contained within their reſpective limits: that the top of the map is always the *north*, the bottom the *ſouth*, the right-hand ſide the *eaſt*, and the left-hand ſide the *weſt*; and that theſe cardinal points, as well as the ſituation of places, with reſpect to each other, are ſeen by the compaſs, which is uſually to be found on maps, and will ſhew the contrary if they vary.

When he is a little further advanced, he may alſo be informed, that the degrees (marked in figures) of the meridian, and parallels (the firſt of which are nearly perpendicular, and the other horizontal lines,) ſhew the longitudes and

latitudes of places; and the *ſcale* of miles annexed, their diſtances; ſo that by placing one leg of a pair of compaſſes to any given place and the other to a ſecond place, and then applying the compaſſes to the ſcale, he can aſcertain the diſtance between them in miles: and that with reſpect to the latitude, it is the diſtance of places from the equator, *north* or *ſouth*, and is meaſured on the map, by the degrees annexed to each parallel line, all of which croſs the meridian lines or degrees of longitude: that on maps in general, there are ten degrees diſtance between each parallel, marked alternately in black and white ſpaces or diviſions; and that the latitude of any place north of the equator, or towards the top of the map, is termed north latitude; and that ſouth of the equator, or towards the bottom of the map, it is termed ſouth latitude. The extent of latitude north or ſouth, is 180 degrees, half the circumference of the globe. That longitude is the diſtance of a place eaſt or weſt from the firſt meridian, which is generally that of London, and has an 0 at both ends of the line, the figures 10, 20, 30, and ſo forth, running to 180 degrees (the ſemi-circumference) to the right and left of it; the right being the eaſt, and the left the weſt, and 10 degrees between each line or meridian; ſo that every place to the right is termed

termed *eaſt longitude*, and thoſe to the left *weſt longitude*; and there is a difference of four minutes of time faſter or ſlower than London, for every degree, according as you go eaſt or weſt; if to the weſt, it is four minutes ſlower, and if to the eaſt, four minutes faſter, becauſe it is in the eaſt the ſun riſes.

This kind of information will pleaſe and entertain at the ſame time that it inſtructs the pupil.

The mode of teaching young people by the means of diſſecting maps, is very proper; but when they are further advanced, it is a good plan to form maps with the outlines of the ſeveral kingdoms and countries, or provinces, delineated upon them, and left blank within the limits, (which ſhould be ſtrongly marked), but all painted in different colours, to diſtinguiſh them, numbered or lettered in the middle, and their names, with the correſponding number or letter annexed, placed in a column at one ſide of the map, for them to learn it by; but when they come up to ſay the leſſon to you, you are to cover that column, and make them give you the names by the help of memory and the numbers.

This applies to continents, the four quarters of the globe, empires, kingdoms, countries, iſlands, ſeas, rivers, gulphs, bays, and, in ſhort,

to every portion of land or water deſcribed on a map.

With this guide, they will by practice in a ſhort time, be able to tell you without looking at it, in what part of the globe or map any place is to be found.

I have ſeen this plan practiſed with great ſucceſs, and I beg leave to recommend it accordingly.

When the *natural* diviſion of the earth is properly learnt and underſtood, the pupil ſhould then proceed to the *political*, getting by heart, as he advances in memory and age, the names of the ſeveral empires, kingdoms, and ſtates, in the four quarters of the globe, with their chief towns—ancient names—diſtance and bearing from London—length and breadth—religion—language, *&c.*; which ſeveral particulars ſhould be all arranged in columns, as you will find it done in TURNER's Introduction to Geography, (price 3s. 6d.), which, as well as his Syſtem of Aſtronomy (price 3s. 6d.) I recommend very ſtrongly as the beſt poſſible work for beginners, and even for thoſe who have made ſome progreſs. Guthrie's Geographical Grammar (price 12s.) will very properly follow it.

As the pupil advances in years and knowledge, more columns might be added, ſuch as the number of ſquare miles—difference of time from

from London—colour of the natives—ſpecies of government—or any other particulars, that, by having them in one point of view, might be found pleaſing or uſeful; indeed, it is a good practice they have in ſome ſchools, of making the elder pupils draw out theſe matters themſelves on a very large ſized paper; by which means it is the better impreſſed on their memories.

In making the pupils acquainted with any particular place on the map or globe, I would not confine myſelf merely to point it out to them, but would inform them what was its bearing from London, or any other conſpicuous meridian of which you might be ſpeaking at the time, and what were the land or water marks by which they might find it again, if neceſſary, or deſcribe its ſituation from memory, in converſation: for inſtance, if ſpeaking, in company, of the iſland of *Malta*, the pupil might obſerve, if he was aſked the queſtion, that it is ſituated in the Mediterranean Sea, ſouth of Cape Paſſaro, in the iſland of *Sicily*, directly eaſt of *Tunis*, on the Barbary coaſt, weſt of the Iſle of *Candia*, and lying in a direct line between the two laſt; he might alſo add, that it is the moſt ſoutherly of all the iſlands in that ſea.

Another very uſeful and novel method of communicating inſtruction with regard to the geographical ſituations of places, to the more advanced pupils, is this.—Take the globe, or a

good map of Europe, and make (with your pencil tracing the progreſs) what I ſhall term a PROSPECTIVE VOYAGE, or ſurvey; for inſtance, let us depart from London, for CONSTANTINOPLE; we paſs the ſtraits of Dover and go down Channel, pointing out to the pupil the counties, cities, conſiderable towns and ports on our own coaſt, ſuch as Kent, Hampſhire, Cornwall, Portſmouth, the Iſle of Wight, Plymouth, Falmouth, the Land's End, *&c.*; and alſo on the oppoſite coaſt of France, ſuch as the iſlands of Jerſey and Guernſey, the provinces or counties of Normandy and Britanny, the cities of *Rouen*, *Caen*, *Rennes*, and *Nantz*; *Uſhant* Point, which anſwers to our Land's End; the port of Breſt, the moſt conſiderable in France; and then Port L'Orient and Belleiſle; from whence ſtretching acroſs the Bay of Biſcay, we paſs Cape Ortegal, the moſt northerly point of Spain, (here ſhew the pupil what a cape is) then Capes Ferrol and Finiſterre, the latter of which is the moſt weſterly point; we then paſs Vigo, a Spaniſh port; Oporto and Liſbon, the two chief ports in Portugal; St. Ubes, a ſmall trading town; and Cape St. Vincent, the moſt ſouth-weſterly point in Spain, which having doubled, we paſs Cadiz, the principal ſea-port town, and go through the Straits of Gibraltar, (which is the moſt ſoutherly point of Spain), into the Mediterranean

terranean ſea, where a wide field opens for our obſervation.

After paſſing Gibraltar, we ſtretch away to the ſouth-eaſt, leaving the Capes de Gat and Palos on the weſt, and the Iſlands of Ivica, Majorca, and Minorca; and northward of them, Barcelona, a Spaniſh ſea-port town; Toulon, the greateſt port in the ſouth of France; and Marſeilles alſo belonging to the ſame power; with the iſland of Corſica, the ports of Nice, Genoa, and Leghorn, on the coaſt of Italy.

Altering that direction, we then paſs the iſland of Sardinia, leaving Rome, the capital of all Italy, the river Tiber, the port of Gaeta, and the gulph and city of Naples to the north-eaſt, and either go through the Straits of Meſſina to the north-eaſt of the iſland of Sicily, or keeping to the ſouthward of it, ſhape our courſe between Cape Paſſaro, its moſt ſoutherly point, and the iſland of Malta; and bearing up to the north-eaſt for the Archipelago, we leave the little iſlands of Corfu, Cephalonia, and Zante, to the north-weſt; entering that ſea, we leave the Morea and Corinth, in Greece, to the northward, and the iſlands of Candia, to the ſouth; Rhodes, Cyprus, and Nicoſia, with the towns of Tyre, Sidon, and Joppa, on the coaſts of the Holy Land, to the ſouth-eaſt; going up the Archipelago on a north-eaſterly and then a north courſe, we paſs the port of Smyrna, and the

famous town of Troy, and enter the Straits of the Dardanelles at the extremity of the Black Sea, directly north-eaſt; at the entrance into this is ſituated the city of Conſtantinople, the metropolis of the Turkiſh empire, whither we were bound, and from whence the teacher may accompany his pupil on a ſurvey of the Black Sea, and thence conduct him into the Sea of Aſoph.

This plan may be extended to all parts of the world, by land or by ſea; and though it is, I believe, very little practiſed by teachers, yet I have reaſon to think, that by accuſtoming pupils to it, they would have a much better idea of the ſituations of places than they generally have; and if to the names of the ſeveral iſlands, cities, towns, *&c.* that are paſſed in theſe voyages, the particulars of what power they belong to, what they produce or are remarkable for, could be added, it would be ſo much the more advantageous to the pupil.

In the great and learned *Boſſuet*'s account of the manner in which he inſtructed the *Duke* of *Burgundy*, and his brothers, ſpeaking of geography, he obſerves:

"Geography was but a ſport and a pleaſant "voyage to us; we fell down rivers in their "gentle current; then put out to ſea, viewed "the coaſts, entered the ports and maritime "cities; then went up the country. This we "performed

" performed not in a hurry, like travellers void " of curiosity, but enquired after every thing " worthy of observation, especially the manners " and customs of the people."

I think this is all that I have to say on the subject, as far as relates to the natural and political divisions of the earth, and the uses and knowledge of maps: but in this, as in all other matters of instruction, great care must be taken with the young pupils, to begin with that which is plain and simple, to teach them but very little at a time, and to fix that well in their heads before you go a step farther, or proceed to any thing new in the science; by which means they will avoid being confused and perplexed. By giving them at first one simple idea, and taking care that they perfectly comprehend *it* before you advance farther, and then adding some other simple idea (which may happen to lie next in the way to what you aim at), and no more to it, and thus proceeding by gentle and insensible steps, children have had early better apprehensions of things, and their thoughts extended further than could have been expected. In fact, all knowledge is gradual and progressive; and if you attempt to go far before the previous principles and parts are thoroughly understood, you pluck the fruit before it is ripe; you puzzle and confound the pupil, and he never has clear ideas of the subject afterwards, perhaps. When he has learnt

learnt any thing himſelf, there is not a better method of fixing it in his memory, and encouraging him to go on, as to ſet him to teach it to others.

I think the ſtudy of the globes ſhould be begun early, and followed up diligently, if the teacher will but be careful to diſtinguiſh what the child is capable of knowing, and what not; for which this will, perhaps, ſerve as a rule that may go a good way; *viz.* that children may be taught any thing that falls under their ſenſes, eſpecially their ſight, as far as their memories only are exerciſed: thus a very young child may learn which is the *equator*, which the *brazen meridian*, *horizon*, &c. which *Europe*, and which *England*, upon the globes, as ſoon, almoſt, as he knows the rooms of the houſe he lives in, if care be taken not to teach him too much at a time, nor to give him any thing new, till that which he is about is perfectly learnt and fixed in his memory.

I ſhall now proceed to the terreſtrial globe, or the *artificial* diviſions of the earth delineated upon it; and as I muſt unavoidably intermix aſtronomical matter or obſervations with what I have to ſay on that ſubject, I ſhall firſt begin with deſcribing the nature and principles of the latter ſcience, and then ſtate what I have to obſerve to the teacher, as the beſt mode of communicating

nicating the knowledge of the terreſtrial globe, in the form of a lecture, and in the terms I have been in the habit of delivering it to my pupils.

I would inform the ſcholar, that aſtronomy teaches us the knowledge of the heavenly bodies; *viz.* the ſun, moon, and ſtars, comets, *&c.* their numbers, magnitude, or ſize, diſtance, and periods of revolution; the power or means by which they are all ſuſpended in the heavens, and kept within the orbit of their ſeveral revolutions, appointed for them by the ADORABLE CREATOR at the beginning of time.

I would inform him, that this power is that of gravitation or attraction, diſcovered by Sir Iſaac Newton, and by which one body has a natural tendency towards another; and that the heavenly bodies in particular, are ſuppoſed to poſſeſs certain qualities of attraction of the ſame nature that a magnet has, with reſpect to a needle or any other metal of the ſame kind; which is proved by the attraction of the moon exerciſed on the waters of our earth, cauſing the flux and reflux of the ſea, and the phenomena of tides. It is alſo defined to be a law by which any body falls to the ground, when diſengaged from what ſupported it. This law pervades all nature.

I would then inform him, that there were ſeveral different opinions entertained both by the

the antients and moderns, reſpecting the ſituation of the earth and heavenly bodies; ſome ſuppoſing that the earth ſtood ſtill, and that the ſun and ſtars moved round it; but that Pythagoras, among the antients, taught the very reverſe; and though his ſyſtem was oppoſed, fell into diſrepute, and was for many centuries totally neglected, yet it was revived about 300 years ago by *Copernicus*, a native of *Pruſſia*; and has been ſince eſtabliſhed on ſuch clear and ſolid principles by our great *Newton*, that it is now univerſally received.

This ſyſtem is diſpoſed in the following manner: The *Sun* is placed in the center, from whence it never moves; but from ſome obſervations made on its ſpots, it is found to have a motion round its own axis, from weſt to eaſt, in about 25 days.

Round about him, at unequal diſtances, *ſeven* opaque or dark ſpherical bodies, continually revolve, to which the ſun diſpenſes light and heat: theſe are called the primary planets. That which is neareſt to the ſun, is called *Mercury*; the next, *Venus*; then our earth; the next beyond, is *Mars*; after him, *Jupiter*; then *Saturn*; and the moſt diſtant of all is, the *Georgium Sidus*, lately diſcovered by Dr. Herſchel: the four laſt are called *ſuperior* planets, becauſe their circuits are beyond the earth's orbit: *Mercury* and *Venus* are called *inferior* planets, becauſe their circuits are within that orbit.

Beſides

Beſides theſe, there are diſcovered in this ſyſtem ſeveral other bodies, which move about ſome of theſe primary planets in the ſame manner as they move round the ſun. Theſe are called *ſecondary* planets or ſatellites. The moſt conſpicuous of them is the *moon*, which moves round our earth; *four* more in like manner round *Jupiter*; according to recent obſervations by Dr. HERSCHEL, *ſeven* round *Saturn*; and *ſix* round the *Georgian*.

All theſe planets, both primary and ſecondary, being opaque bodies, and receiving all their light from the ſun, as well as making their great revolutions round him, are, for thoſe reaſons, looked upon as dependents on him, and make up altogether what is called the ſolar ſyſtem, and which all aſtronomers now conſider as the true one.

All theſe planets move one way, from weſt to eaſt: and of the primary planets, the moſt remote is the longeſt in finiſhing its courſe round the ſun.

With reſpect to the tables of the diſtances of the planets from the ſun, and the variation of their diſtances at different periods of their revolutions, occaſioned by the elliptical form of their orbits, the teacher will find them ſo well laid down in *Turner*, *Guthrie*, and other aſtronomical guides, that it is unneceſſary to inſert them here: the ſame alſo with regard to their diſtances

diſtances from each other; their magnitudes and diameters; the periods of their revolutions round the ſun, and round their own axis: but I muſt here obſerve, that it is not yet aſcertained whether Mercury and Saturn revolve round their axis, on account of the former's being too near the ſun, and the latter too far off to determine that point. It is known that all the other planets do, by the appearance and diſappearance of certain ſpots on their ſurfaces at certain ſtated times; and it is very probable that Mercury and Saturn do the ſame, though it is not yet diſcovered.

The moon revolves about her axis, in the ſame ſpace of time that ſhe makes her courſe round the earth, which is twenty-eight days, or a lunar month, as it is called; ſo that her inhabitants have but one day throughout the year. She is alſo carried with the earth round the ſun.

The tables of the periods of the revolutions of the other moons or ſatellites round their reſpective primary planets, with their ſeveral diſtances from them, may alſo be found in the before-mentioned authors; but it is proper to obſerve, that *Saturn*, in addition to its moons, has alſo a ſhining, broad, and flat ring, which encompaſſes it, without adhering in any place to its body. But what laws this ring is ſubject to, or what uſes it may ſerve, are yet unknown.

My

My reaſon for not inſerting the tables here is, that it will prevent perplexity to the young pupil, who may make them a ſeparate ſtudy in detail with other matters, after he has acquired a knowledge of the great outlines of the ſcience, which ſhould be compreſſed within as ſmall a compaſs as poſſible at firſt, and not too much at a time given him to learn.

It is, however, neceſſary for the pupil to know the ſeveral diſtances of the primaries and their planets, in order to comprehend more clearly the excellency of the *Copernican* ſyſtem; according to which, the motions of all the planets, both primary and ſecondary, are regulated by one general law; *viz.*

The ſquares of the periodical times of the primary and ſecondary planets, are to one another, as the cubes of their diſtances from the ſun, and the center of their particular primary.

I would then inform the pupil, that far beyond this ſolar ſyſtem are placed the *fixed* ſtars, ſuppoſed to be *ſuns* and the centers of other ſyſtems, at ſuch an immenſe diſtance, that the beſt teleſcopes repreſent them but as points: they are called *fixed ſtars*, becauſe from all ages they have not been obſerved to change their ſituation. Hence it is uſual to denote the *place* of any of the intermediate celeſtial bodies, or moving ſtars, called planets (from *planao*, a *Greek* word, ſignifying to wander), by aſſigning what

what part of the ſphere of the fixed ſtars they appear to us to be *in*, or more properly *under*. And accordingly, it is uſual to diſtinguiſh that tract of the ſphere of the fixed ſtars, under which all the planets move, by the *aſteriſms* or conſtellations that lie in that tract; which being fancied to repreſent ſeveral things, in order to diſtingniſh them from each other, are therefore called *ſigns*; and becauſe the things repreſented by them are moſt of them *zodia*, or animals (from a *Greek* work ſignifying *living creatures*); hence all this tract is ſtyled the *Zodiac*. Now the *orbit*, wherein the earth performs its annual period (and which the ſun ſeems to move round every year) runs under the very middle of the zodiac; whence this middle part of the zodiac is of ſpecial note in aſtronomy, and is therefore diſtinguiſhed by a peculiar name, being called the *ecliptic*. This, as well as the whole zodiac, is divided into twelve parts, diſtinguiſhed by the *conſtellation* or *ſign*, to which each part was formerly aſſigned, and correſponds with the ſame ſigns on the wooden horizon in the terreſtrial globe.

The names and characters of the ſaid ſigns, are as follow:

Aries.	Taurus.	Gemini.	Cancer.	Leo.	Virgo.	Libra.
♈	♉	♊	♋	♌	♍	♎
Scorpio.	Sagittarius.	Capricornus.	Aquarius.	Piſces.		
♏	♐	♑	♒	♓		

Beſides

Beſides the planets, there are other erratic bodies, called comets, whoſe orbits run in quite different directions from theirs, and ſo eccentric, that they make excurſions upwards of ten thouſand millions of miles beyond Saturn's orbit; and yet at that amazing diſtance they are incomparably nearer to the ſun than to any of the ſtars; as is evident from their keeping clear of the attracting power of all the ſtars, and returning periodically by virtue of the ſun's attraction.

It is calculated, by aſtronomers, that the neareſt of the fixed ſtars are at leaſt 100,000 times further from us, than we are from the ſun; nay, ſo inconceivable is the ſpace betwixt us and them, that aſtronomers have computed the diſtance of *Sirius*, or the dog ſtar, which is thought the neareſt, to be no leſs than 2,200,0000,000,000, *i. e.* two billions and two hundred thouſand millions of miles. So that a cannon ball, in its ſwifteſt motion, would be above ſix hundred thouſand years in travelling it.

If a ſpectator was placed as near to any fixed ſtar as we are to the ſun, that ſtar would, in all probability, appear to him as big as the ſun appears to us; and our ſun would ſeem no bigger than a fixed ſtar.

With reſpect to the uſe and practice of the *problems* on the CELESTIAL globe, I do not think it neceſſary, in a work of this kind, to enter

into the particulars of them, as they are ſeldom the objects of juvenile ſtudy, and are ſo limited in their nature from the confined knowledge we have of aſtronomy, that the teacher can have no difficulty in explaining them, with ſuch able guides as *Turner*, *Guthrie*, and the writers on aſtronomy in particular, ſuch as *Haller*, *Keil*, *Newton*, *Ferguſon*, *Gregory*, &c.; nor, indeed, would it appear neceſſary to me to enter into any deſcription of the lines and circles on the terreſtrial globe, or its figure and other particulars, did I not know, by experience, that it is not merely explaining them that will anſwer the purpoſe to the young pupil, but the doing it in ſuch a connected, methodical, conciſe, and clear manner, diveſted of all unneceſſary detail, and the uſual farrago of ſcientific pedants in the art, that he may compleatly comprehend it, and be led to attend voluntarily to it, by departing in ſome meaſure from the beaten track of written treatiſes on the ſubject; it is proper for me to obſerve here, that boys ſhould be addreſſed in language adapted to their years, and ſuch as they can underſtand, ſimple and conciſe, but forcible; they will learn much more from your delivering what you wiſh to teach them, by way of lecture, than from books, or obliging them to get it by heart; for it then becomes a taſk, and not an amuſement; a labour, and not an *attractive novelty*.

I will

I will now ſuppoſe myſelf with the globes before me, addreſſing a claſs of young gentlemen or ladies.

The GLOBE on which we live is an oblique ſphere, appearing to be equally ſurrounded by the heavens on every ſide, reſting upon nothing, and ſuſpended in the heavens as you ſee the other moving ſtars are, by the power of attraction and gravitation, ſomething like that of the magnet; it revolves round the ſun, which is immoveable, in 365 days, 6 hours, or, as we call it, a year, being kept in its proper orbit or path, by the attraction of the ſun and the planets, and its own gravitation or natural tendency to its center.

A SPHERE is not perfectly round like a marble, but is flat at the top and bottom, or, as we call it, at the poles, which are the extremities of this imaginary line, called the axis, the upper being termed the North Pole, and the lower the South Pole.

There are three kinds of ſpheres; *viz.* a right ſphere, a parallel ſphere, and an oblique ſphere.

In a right or direct ſphere, the poles, as you perceive, (here ſhift the globe to a right ſphere,) both touch the wooden horizon, the equator paſſes through the *Zenith* and *Nadir*, and the parallel circles fall perpendicularly on the horizon, which is the caſe of thoſe people who live

under the equinoctial line. The Zenith and Nadir are the poles of our horizon, or extent of view around us, being two imaginary points in the heavens; the point directly over our heads, being called the Zenith, and that point of the heavens under our feet, the Nadir. You will, perhaps, be ſurpriſed to hear me ſay, that point of the heavens *under* our feet; but the fact is, as the earth turns round upon its axis thus—(turning the globe once round, and pointing to the axis) every twenty-four hours, which makes day and night, by its being turned alternately towards and from the ſun, as you ſee me turn this globe towards and from the window or candle, that part of the heavens which was over our heads at twelve at noon, muſt, of courſe, be under our feet at twelve at night; but ſpeaking properly, no part of the earth can be ſaid to be uppermoſt or lowermoſt: all the inhabitants of the earth ſeem to have the earth under their feet, and the heavens over their heads, and ſhips ſail with their bottoms oppoſite to each other.

In a parallel ſphere the poles are in the Zenith and Nadir, or ſtand exactly perpendicular thus, (placing the globe in a parallel poſition:) the equator is parallel to, and coincides with, the wooden horizon, ſo much ſo indeed, that you ſee the horizon quite covers it from your view; the parallel circles are alſo parallel to the horizon,

horizon, which can only be ſaid of people under either pole.

In an oblique ſphere, as this planet on which we live is, the inhabitants have one of the poles above, and the other under the horizon; thus—(place the globe in an oblique poſition) the axis ſloping, the North Pole inclining towards the horizon, and the equator and parallel circles cutting it obliquely, as is the caſe of all who do not live under the equinoctial or the poles.

For the better underſtanding the doctrine of the globe, it is neceſſary to inform you, that this (pointing to the globe) is an artificial reſemblance of the planet we live upon, called, by aſtronomers, the earth, and that theſe ſeveral circles deſcribed upon it are merely imaginary, the better to give you an idea of the nature of the real globe and its motions, various poſitions, &c. for the earth itſelf, ſeen at a certain diſtance with a teleſcope, would appear to you as an orange does to the bare eye, with ſmall protuberances on its ſurface.

The Circles are: 1. The Equator, and the circles parallel to, or running even with it. It divides the globe into two equal parts or hemiſpheres (which in the Greek language, from whence it is derived, means half a ſphere;) and on this circle are marked the

degrees of longitude or diſtance from the firſt meridian (which is this line running from pole to pole, and paſſing through the word *London*, from whence our longitude is always calculated, and is marked with an 0, as yeu ſee) either eaſt or weſt, each meridian being ten degrees diſtant from the other, and running on to 180 either way, which is juſt one half the circumference or meaſurement of the globe round its center.

The parallel circles are ſo called from their running parallel to, or even with the equator, of which there are nine in number incluſive between the equator and either pole, 10 degrees diſtant from each other, every degree of latitude being 60 geographical miles, and every 10 degrees 600 ſuch miles; conſequently it is 5400 miles from the equator to either pole, which is one quarter of the circumference of the globe.

2. The *Brazen Meridian* is that circle in which the globe is ſuſpended and moves, dividing it into the eaſtern and weſtern hemiſpheres, and on which the degrees of latitude are marked, being counted northward from the Equator to the North Pole, and ſouthward from the Equator to the South Pole. Thoſe lines which you perceive run parallel with it, are termed meridional lines, and where they are 24 in number they are 15 degrees in meaſurement, or one hour in difference of time aſunder: thus thoſe who live under the meridional line on the right-hand, that

that is, to the eaſtward of the firſt meridian, have the ſun one hour before us, and thoſe who live under the meridional line on the left hand, that is, weſt of us, have the ſun an hour after us; this ſhews what is meant by eaſt and weſt longitude: and as LONGITUDE is nothing more than the diſtance any place is eaſt or weſt of the firſt meridian, ſo LATITUDE is the diſtance a place is from the Equator north or ſouth; if it be north of the Equator, it is called north latitude; and if it be ſouth of the Equator, it is called ſouth latitude.

3. The ZODIAC is that circle which cuts the Equator obliquely, and is divided into 12 ſigns, through which the ſun ſeems to paſs within the ſpace of 12 months, each ſign containing 30 degrees of longitude. The ecliptic is a line paſſing through the middle of the Zodiac, and ſhews the ſun's, or rather the earth's path or orbit in which it moves annually. The ſigns in the Zodiac correſpond with thoſe on the wooden horizon, as you perceive.

4. The HORIZON is this broad wooden circle in which the globe ſtands, dividing it into the upper and lower hemiſpheres. The place where any one ſtands, is the center of this horizon and hemiſphere.

The *ſenſible* horizon, or the loweſt part of the heavens you can ſee, ſeems to touch the ſurface of the earth, and is the utmoſt limits of our

ſight, whether we ſtand upon a mountain, or an extenſive plain, or in a valley. The *rational horizon* is ſuppoſed parallel to this, and to be extended to the heavens. On the wooden horizon months and days of the year, with the ſigns and degrees of the Zodiac correſponding with them, are marked, in order, on any given day of the month, to find the ſun's place in the ecliptic.

Theſe four circles are called Great Circles, and all divide the globe into two equal parts.

5. The TROPICS are thoſe two circles, one on each ſide the Equator, and both at 23 degrees and a half diſtance from it. The word tropick is derived from the Greek word *trepo*, I turn back; becauſe when the ſun, in his progreſs, arrives at either of theſe circles, he turns back again; they ſhew how far he proceeds north or ſouth of the Equator every year, and are the boundaries of his progreſs. The tropic of *Cancer* is *north* of the Equator, and the tropic of *Capricorn ſouth* of it: when he arrives at Cancer, it is *midſummer* with us, and we have the longeſt day, as on June 22d; when he reaches the Equator again it is *autumn* with us, and the days and nights are equal as on September 23d; when he reaches the Tropick of Capricorn, it is the depth of *winter* with us, and the ſhorteſt day, as on December 21ſt; and when he returns to the Equator again, it is *ſpring* with us,

and

and the days and nights are equal, as on the 20th of March. You muſt alſo obſerve, that when the ſun is arrived at Cancer, and it is ſummer with us, it is winter to thoſe who live between the Tropic of Capricorn and the South Pole; and that when the ſun is in Capricorn, it is winter to us who live between the Tropick of Cancer and the North Pole. The inhabitants who live between the Tropics and the Polar Circles, have temperate degrees of heat and cold, as we have; but thoſe who live between the Tropics, and eſpecially under the Equator, have very hot and burning weather.

6. The POLAR are thoſe two CIRCLES which you perceive neareſt the Poles, that at the North Pole being called the Arctic, and that at the South the Antarctic: it is called Arctic from the Greek work *arctos*, a bear; becauſe the *bear* is the neareſt conſtellation in the heavens to the North Pole, and Antarctic derived from the ſame language, means oppoſite to or over againſt the bear (*anti*, in Greek). Theſe circles are 23 degrees and a half diſtant from each Pole, and 66 degrees and a half diſtant from the Equator; the inhabitants who live within them have the greateſt extremity of cold, but their day is exceedingly long, the ſun being from one month to ſix without ſetting to them; though, at the ſame time, they feel very little of his kindly genial influence.

7. The

7. The earth is divided into five ZONES; *viz.* the *Torrid* Zone, the two *Frigid*, and the two *Temperate*; and are called Zones, becauſe they encompaſs the earth like a girdle, or belt, which is the Engliſh for the Greek word *Zoné*.

The Torrid Zone lies between the two Tropics, and is ſo denominated from the exceſſive heat of the climate, the ſun paſſing over it twice every year, and being in a manner perpendicular over their heads; not diſtant in the ſouthern horizon as he is to us, with his rays or heat conſequently falling more obliquely upon us, and not with half that effect: the great heat of the Torrid Zone in ſome meaſure accounts for the ſwarthy, ſun-burnt colour of the inhabitants who live under it.

The two Frigid Zones lie within the Polar Circles, and are ſo called from the exceſſive cold within thoſe circles, from *frigidus*, a Latin word, meaning cold.

The two Temperate Zones lie between the Tropics and the Polar Circles; *viz.* the Northern Temperate between the Tropic of *Cancer* and the Arctic Circle, and the Southern Temperate between the Tropic of *Capricorn* and the Antarctic Circle. Great Britain lies in the Northern Temperate Zone, and therefore we have a mild climate, not too hot or too cold; and it is remarkable, that the further you go from England ſouthward, the more and more

ſwarthy

ſwarthy the inhabitants are, till at laſt they are found quite black.

The Tropics, Polar Circles, *&c.* are called leſſer circles, becauſe they do not divide the globe into two equal parts, as the greater circles do.

CLIMATES are ſpaces on the ſurface of the globe, bounded by imaginary circles, parallel to the Equator, ſo broad, that the length of the day in one exceeds that of another half an hour, of which there are 60 in number; *viz.* 24 from the Equator to each of the Polar Circles, and 6 from either of the Polar Circles to the reſpective Poles, between which laſt, there is a difference of an entire month; the ſun appearing in the firſt, one month above the horizon, *without ſetting*; in the ſecond two months, and ſo on to the Pole, where there is a day of ſix months, and the nights proportionable, when the ſun is on the oppoſite ſide of the Equator.

Theſe Climates are not of an equal breadth, and they are much the broadeſt near the Equator; the firſt Climate next the Equator being 8 degrees odd minutes in breadth, whereas the 11th Climate is little more than 2 degrees broad, as may be ſeen by referring to your PRECEPTOR, vol. I. p. 195; and where you will find, that in the Frigid Zone the days encreaſe by months, as above-mentioned; you will alſo find by the table, page 196, that every degree

degree of longitude counted on the Equator, is 60 geographical miles, but that as the meridional lines approach nearer each other as you advance towards either Pole, conſequently the number of miles between thoſe lines muſt leſſen in proportion; for inſtance, a degree of longitude in 52 degrees of latitude, contains but 37 miles, though it be full 60 miles upon the Equator.

The Antipodes (from the Greek words *anti* and *pous*, oppoſite our feet) are thoſe inhabitants of the globe who lie under oppoſite meridians, and oppoſite parallels; theſe have exactly different ſeaſons from us, their winter being our ſummer, their noon-day our midnight, and their longeſt day our ſhorteſt: in a word, they are preciſely in the ſame degree of latitude and longitude ſouth of the Equator, as we are north of it. Here the teacher ſhould ſhew the pupils the preciſe Antipodes of Great Britain, by turning the horary index 12 hours from the given place, or turning the globe half round, and then counting as many degrees on the oppoſite ſide of the Equator, as the given place is on this.

The Hour Circle is that brazen horary circle fixed on the north or uppermoſt part of the globe, with an index, and ſhews how many hours, and conſequently how many degrees, any place is eaſt or weſt of another place, for as every

every 15 degrees eaſt or weſt is an hour, ſo every hour is 15 degrees.

The Quadrant of Altitude is that pliant braſs plate divided into 90 degrees, one fourth of the circumference of the globe, by which the diſtances of places may be found by meaſurement, and many uſeful problems reſolved.

The circumference of, or meaſurement round the terreſtrial globe, is 360 degrees, every degree being 60 geographical miles, (or 69 and a half Engliſh meaſured miles by the ſtandard;) ſo that the whole circuit is 21,600 ſuch miles, and if the diameter was a third part of the circumference, the diameter would be 7200 miles; but the DIAMETER is as 7 to 22, which makes it ſomething leſs than a third part of the circumference. If we reduce the geographical miles to Engliſh, or meaſured miles, the circumference of the earth will be about 24,000 miles, and the diameter 8000.

To rectify the globe previous to the performance of any of the problems, let the brazen meridian ſtand due north and ſouth, then bring the given place to the brazen meridian, and let there be 90 degrees between that place and the horizon, both north and ſouth, and the given place will be in the *Zenith*; the globe being thus rectified, you may proceed to ſolve any problem; but as they are laid down in every geographical

geographical work, there is no occaſion to inſert them here.

I have been often aſked by a pupil why the ſphere of the earth is oblique, the days and nights unequal, and the ſeaſons different from what they uſed to be, as he had read of their being formerly otherwiſe.

To this I have generally replied, that it is with much reaſon ſuppoſed, that, previous to the general deluge, the globe or ſphere of the earth was in a parallel poſition, *i. e.* that its Poles were exactly perpendicular, or in the Zenith and Nadir, and without having the North Pole inclining to the horizon, as it now does; in which poſition of the earth, equal day and night, and two ſeaſons only, the one moderately warm, and the other moderately cool, or *ſpring* and *autumn*, were the conſequence; as it is repreſented to have been in the golden age by the CLASSICAL authors, and which we have alſo reaſon to conclude from the HOLY SCRIPTURES, to have been the caſe, on account of the very great age to which mankind attained in thoſe days that preceded the DELUGE; to cauſe which, there is great reaſon to think, that by a *fiat* or command of the ALMIGHTY, (ſeconded, however, by ſome *natural* cauſe, ſuch as the loſing a portion of its uſual gravitation, or the full effect of ſolar and ſideral attraction for a time; by which means it might have been thrown

out

out of its original poſition and orbit), the globe of the earth received a different inclination from what it previouſly had, and loſing that proper balance which preſerved the waters of the *ocean* within their appointed limits or channels, overflowed the earth, and aſſiſted the fountains of heaven in deluging it; after which all thoſe diſeaſes and complaints that the dampneſs of the earth, the extremity of heat and cold, and the variation of the ſeaſons, added to the ſudden changes of weather, would naturally introduce, greatly ſhortened the lives of men, and made them liable to numberleſs infirmities unknown before the deluge, and the change of the poſition of the globe. I believe this is the opinion of the learned in general, and, I confeſs, has always appeared to me to be the moſt rational way of accounting for the alteration.

The teacher ſhould deſcribe to the pupil the nature of *eclipſes*, *falling* or *ſhooting ſtars*, the *northern lights*, *volcanoes*, *whirlpools*, and the effects of irruptions of the ſea beyond its uſual channel, thereby cauſing land to be ſwallowed up or changed into ſands; and iſlands, rocks and land, in progreſs of time, to ariſe out of the ſea by its ſinking or retreating.

I would inſtance the *Goodwin* Sands to him; and the reaſon there is to think that ſome parts of the counties on the eaſt coaſt, were once covered by the ſea.

I would

I would alſo delineate for him on paper, by way of a map, the forms of all the ſeveral natural diviſions of the land and water, and make him point out their various diſtinctions.

The teacher ſhould make theſe ſciences as inſtrumental as poſſible, in promoting religious and ſublime notions of the DEITY in the minds of of his pupils.

It may be neceſſary to acquaint the reader, that the moſt recent and correct globes, are thoſe lately publiſhed by W. and S. JONES, Opticians, *&c.* No. 30, Holborn, under the title of the *New Britiſh Globes*, of 18 and 12 inches in diameter, containing all the important geographical and aſtronomical diſcoveries, to the preſent time, and in the Engliſh language.

Adams's Aſtronomical Eſſay, 8vo, 1799, will alſo be very uſeful to both teacher and pupil.

CHAPTER

CHAPTER V.

SECT. III.

Chronology.

THE ſtudy of *Chronology* and *Hiſtory* ſeems to be one of the moſt natural delights of the human mind. It is not eaſy to live without enquiring by what means every thing was brought into the ſtate in which we now behold it, or without finding in the mind ſome deſire of being informed concerning the generations of mankind, that have been in poſſeſſion of the world before us, whether they were better or worſe than ourſelves; or what good or evil has been derived to us from their ſchemes, practices, and inſtitutions.

Theſe are enquiries which HISTORY alone can ſatisfy; and hiſtory can only be made intelligible by ſome knowledge of *chronology*, the ſcience by which events are ranged in their order, and the periods of computation are ſettled; and which therefore aſſiſts the memory by method, and enlightens the judgment, by ſhewing the dependance of one tranſaction on another. Ac-

cordingly it ſhould be diligently inculcated upon the pupil, that unleſs he fixes in his mind ſome idea of the time in which each man of eminence lived, and each action was performed, with ſome part of the cotemporary hiſtory of the reſt of the world, he will conſume his life in uſeleſs reading, and darken his mind with a croud of unconnected events, his memory will be perplexed with diſtant tranſactions reſembling one another, and his reflections be like a dream in a fever, buſy and turbulent, but confuſed and indiſtinct.

The *technical* part of chronology, or the art of computing and adjuſting time, as it is very difficult, ſo it is not of abſolute neceſſity, but ſhould, however, be taught ſo far as it can be learned, without the loſs of that time which is required for attainments of nearer concern and greater importance.

It is abſolutely neceſſary that youth ſhould be made acquainted with chronology, in order to ſtudy hiſtory to advantage, which is the great repoſitory of prudence and civil knowledge.

Without chronology, hiſtory could not well be retained, nor would it be very uſeful; it would, indeed, be nothing but a jumble of facts, confuſedly heaped together without order or regularity.

It is proper that the pupil ſhould have in his mind a connected view of the whole current of time,

time, and the ſeveral conſiderable *epochs* that are made uſe of in hiſtory.

It is by means of chronology and hiſtory, that the actions of mankind are arranged in their proper place, both as to the periods of time and their countries alſo; by which means they are not only more eaſily retained in the memory, but in that natural order which alone can furniſh thoſe correct obſervations, which make a man the better and the abler for reading them.

When we ſpeak of *chronology* as a ſcience young people ſhould be made acquainted with, we do not mean the little controverſies that are in it: theſe are endleſs, and moſt of them of ſo little importance to a gentleman, as not to deſerve the being enquired into, were they even capable of our eaſy deciſion.

In teaching youth, we ſhould, therefore, totally avoid all the learned noiſe and duſt of the mere chronologiſt; for the leſs compaſs the inſtructions are brought into, conſiſtent with perſpicuity and accuracy, and the leſs the pupil is encumbered with, of unneceſſary detail and intricate diſcuſſion, the better will he underſtand what he is about.

I would inform my pupil, that we can form but very confuſed notions of the riſe and fall of empires, and the eſtabliſhment of ſtates, without ſome ſuch general comprehenſion of the

whole current of time, as may enable us to trace out diſtinctly the dependence of events, and diſtribute them into thoſe periods and diviſions, that may lay the whole chain of paſt tranſactions in a juſt and orderly manner before us.

In teaching chronology to a claſs, or even a ſingle pupil, I have been in the habit of doing it by way of a continued lecture on the ſubject, in ſuch terms as theſe; and I think it the beſt method of laying it down, both for the uſe of the teacher and the pupil, ſtating nothing more than what is abſolutely neceſſary to render the buſineſs clear and intelligible, and to preſerve the connection unbroken by long digreſſions or tedious deſcriptions: the ſhorter and fewer the ſeveral rules, remarks, *&c.* are made for beginners, the more eaſily will they get them by heart, and retain them in the memory. They can afterwards, as they advance in years and their other ſtudies, enter more deeply into the ſubject; but to young pupils nothing more is neceſſary than what the teacher will find in the following pages, and which in teaching he may either add to, or take from, as he thinks fit.

The word chronology is derived from two Greek words, *chronos*, time; and *logos*, a deſcription, or diſcourſe concerning: in few words, chronology is that ſcience which takes an account of time, and adjuſts it to paſt tranſactions.

It

It is divided into two parts or branches; one comprehending the knowledge of the various meaſures and periods by which time is computed; and the other deſcribing the ſeveral æras and epochs, from which, according to different nations, events are dated.

By knowing theſe two, the pupil will become maſter of the whole current of time; as being not only able to calculate the length of any interval or diſtance, but alſo by comparing the computation of various ages and kingdoms, to fit them to one another, and by adjuſting the whole to ſome ſtandard period, regulate the entire ſucceſſion of paſt tranſactions.

As to the firſt branch, *viz.* that of the various meaſures and periods by which time is computed, the *idea* of TIME in general is acquired by conſidering the parts of duration as exiſting in ſucceſſion from one to another, by ſeveral intervals; ſo the *idea* of any particular time, or length of duration, as a *day*, a *month*, a *year*, &c. is obtained by obſerving certain appearances uniformly returning, at regular, and ſeemingly equi-diſtant periods: for thus we get the notion of *equal* ſpaces, and by variouſly multiplying and combining theſe, can form to ourſelves different meaſures of time, of different lengths, according to the exigency of things.

Now the motions of the ſun and other heavenly bodies, on account of their regularity,

conſtancy, and equality, naturally invited men to make them the ſtandard by which to regulate theſe ſeveral dimenſions; and becauſe the apparent diurnal revolution of the ſun, was not only conſtant and regular, but frequent, and of a ſhorter circuit, hence it naturally became the firſt meaſure of time, under the denomination of a *day*.

A day, therefore, may be defined to be a diviſion of time drawn from the appearance and diſappearance of the ſun; and is of two kinds, *artificial* and *natural*.

The artificial day, which ſeems to be that primarily meant by the word day, is the time of light, or of the ſun's ſtay above the horizon, determined by his riſing or ſetting: in oppoſition to which, the time of darkneſs, or of the ſun's continuance below the horizon, from ſetting to riſing again, is called night.

The natural, or as it is called, the civil day, is that ſpace of time wherein the ſun compleats his circuit round the earth; or, to ſpeak properly and aſtronomically, the time of an entire revolution of the equator.

Different nations fix the beginning of their day variouſly, ſome computing from the riſing, others from the ſetting of the ſun, and others again from his paſſing the upper or lower meridian: we date the beginning of *our* day from midnight;

midnight: the Jews date theirs from ſix in the evening.

All the meaſures of time made uſe of in chronology, are no other than various combinations of days, accommodated to the exigencies of things. We will, therefore, now take an account of the ſeveral diviſions and claſſes, ſhew how they are formed, and in what manner applied to the regulating of paſt tranſactions, and connecting the ſeries of hiſtory.

The firſt and moſt ſimple combination of this kind now in uſe, is what we call a *week*, and is a ſyſtem of *ſeven* days continually recurring, inſtituted to perpetuate the memory of the creation, which being finiſhed in ſix days, the ſeventh was appointed a day of reſt, and thence forward every ſeventh day, in commemoration of this great event.

It is obſervable, that not only the *Jews*, to whom this inſtitution was revealed by God himſelf, but the *Syrians* alſo, the *Egyptians*, and moſt of the Oriental nations, made uſe of their diviſion of time into weeks; and this was probably owing to ſome remains of the tradition of the creation, which they had ſtill retained, with divers others.

The next conſiderable diviſion of time, is into *months*.

Months are diſtinguiſhed into aſtronomical and civil: aſtronomical are thoſe meaſured by

the revolution and phaſes (or appearances, from a Greek word, *phaino*) of the moon: theſe are again ſubdivided into *periodical* and *ſynodical*.

The periodical month is that ſpace of time, in which the moon, by her motion, returns to the ſame place of her orb from whence ſhe ſet out, and conſiſts of 27 days, 7 hours, and 43 minutes nearly. The ſynodical month is computed from one conjunction of the ſun and moon, to the next conjunction following: the periodical is always the ſame, becauſe it relates only to the moon's orbit, and her entire revolution in the zodiac: the ſynodical month is always greater than the periodical, and varies more or leſs, according to the nature of her poſition with reſpect to the ſun; for his apparent motion being different in different parts of his orbit, muſt occaſion ſome variety in this reſpect, therefore the ſynodical month is ſometimes 29 and a half, ſometimes 30, and even of 31 days duration.

This ſynodical revolution of the moon was the proper lunar month of the ancients, and was chiefly in uſe among them.

The civil month is no more than that ſpace of time, by which we divide a year into 12 parts, and is different in different nations.

The civil calendar months which are now uſed throughout Europe, all conſiſt of 30 or 31 days, February excepted, which every fourth year

year includes 29 days, (called leap-year), and in the other years only 28.

The laſt and greateſt diſtribution of time, founded on the motion of the heavenly bodies, is a *year*, meaſured by the ſun's apparent revolution in the ecliptic.

This annual apparent revolution of the ſun (or rather of the earth round the ſun) was, by degrees, obſerved by the antients, becauſe it was accompanied in its progreſs by a revolution of the ſeaſons, and it could not have been long after the creation, before the firſt men perceived theſe regular changes, and were under the neceſſity of attending to them, in order to fix the periods of ſeed-time and harveſt; and as ſeveral other important concerns of life depended upon this diſcovery, they were probably the more diligent in their obſervations and reſearches: curioſity even would, of courſe, naturally induce them to endeavour to find out the cauſes of theſe viciſſitudes of the ſeaſons, which follow one another in ſucceſſion, and always return when the ſun returns to the ſame part of his orbit which produced them before.

Having, therefore, found that this change of ſeaſons was occaſioned by the ſun's apparent revolution in the ecliptic, they ſet themſelves to compute the time in which this revolution was performed; and having determined it in the beſt manner

manner they could, thereby aſcertained the due return of the ſeaſons.

This revolution, according to the niceſt calculations of modern aſtronomers, is found to contain 365 days, 5 hours, and 49 minutes. It cannot be expected, however, that in the earlier ages of the world, when aſtronomy was but in its infancy, this accuracy of calculation could have been obtained. Men approached gradually to the true meaſure of the year, correcting former errors by new obſervations. Their firſt computations, as it is natural to ſuppoſe, muſt have been deficient. The moſt ancient form that we know of, is the Moſaic year, which divides it into 360 days, and is ſuppoſed to be as ancient as the deluge; for Moſes, in ſpeaking of that general caſtrophe, aſſigns 150 days to 5 months, which is allowing 30 days to a month, and 12 months of 30 days, make exactly 360 days.

Herodotus mentions, that the Egyptians alſo made their year conſiſt of the ſame number of days.

Hermes Triſmegiſtus added five days more to that number, by which means they came pretty near the truth; and, on this footing, *Thales* is ſaid to have inſtituted the Grecian year.

Julius Cæſar afterwards made a reformation in the calendar; for in his time the winter months were fallen back into autumn, and the autumn

autumn months into ſummer: in order, therefore, to reſtore the ſeaſons to their proper months, he ordered the year in which he began the reformation of the calendar, to conſiſt of 445 days, being the number above 365, which, in the courſe of many years, it had appeared to have fallen behind hand: this done, by the aſſiſtance of *Soſigenes*, a famous mathematician of *Alexandria*, he inſtituted a ſolar year of 365 days 6 hours; and theſe 6 hours every fourth year making one day, were added to February, ſo that every fourth year the Roman *ſextus calendas* MARTII, being *bis*, or twice repeated, to introduce that additional day, gave riſe to what we call the *biſſextile*, or leap-year: it is called leap-year, becauſe the year ſeems to leap a day forward.

But though this was a good reckoning of the year, and was for a long time made uſe of in Europe, as coming very near the truth, yet it is not aſtronomically exact. We have already ſeen, that from the beſt obſervations, the aſtronomical year conſiſts of 365 days, 5 hours, and 49 minutes: but the *Julian* form computes it at 365 days, 6 hours, which is 11 minutes greater than the truth; and although this in the conſideration of ſingle years appears to be but of little moment, yet, in the ſpace of a century, it amounts to almoſt a whole day, and in proportion as time runs on, the error becomes more conſiderable.

In

In the year 1582, Pope Gregory reformed the calendar, the equinoxes and ſolſtices having gone back 10 entire days in the courſe of years, by the amount of the 11 odd minutes before mentioned; by which the vernal equinox, inſtead of the 21ſt, fell upon the 11th of March.

To remedy this, Gregory ordered 10 days to be ſuppreſſed, ſo that the 11th of March was called the 21ſt; and to prevent the like variation for the future, he inſtituted a new form of years, called the Gregorian, in which, once in 133 years, a day is taken out of the calendar, making the amount of the 11 odd minutes too much in that ſpace of time.

The Gregorian is, therefore, an improvement upon the Julian account of time, and carries the form and eſtabliſhment of the year to as great a degree of perfection as it is capable of, the vernal equinoxes being thereby fixed, almoſt for ever, to the 20th or 21ſt of March.

The Julian, or Old Style, as it is called, was uſed in England till September 1752, when the Gregorian, or new ſtyle, took place, as it does in moſt other Chriſtian countries of Europe: at the end of the ſeventeenth century, in conſequence of his plan, another day was ſtruck out of the calendar, which made 11 in all, the preſent difference between the new and the old ſtyles.

In

In the computation of very large intervals, it has been found neceſſary to proceed by combinations of years.

The Eaſtern nations formed ſeveral of theſe claſſes of years, by which they not only computed time in general, but alſo the reigns of their particular princes. Thus *Beroſus*, in his Hiſtory of the Chaldean Kings, computes by *Sari*, *Neri*, and *Soſi*: theſe meaſures of time, though common, and well underſtood in the age of that hiſtorian, are, nevertheleſs, wholly unknown to us, any farther than that they are certain collections of years, whoſe numbers we can only gueſs at.

The *Jubilees* and *Sabbatical years* of the Jews, are claſſes, or intervals of years of far greater importance, not ſo much for their uſe in calculations, as becauſe of the cuſtoms depending upon them, and the frequent alluſions made to them both in the hiſtorical and prophetic books of Scripture.

Every ſeventh day with them was a day of reſt, and kept holy; ſo likewiſe was every ſeventh year a year of reſt to the ground, in which they were neither to ſow nor reap. By this means their time was divided not only into weeks of days, but alſo into weeks of years, which laſt are thoſe alluded to in *Daniel*'s prophecy of the 70 weeks, which could not be underſtood,

ſtood, without knowing that this diviſion, or claſs of years, was uſed by the Jews.

The year of *Jubilee* was every forty-ninth year, and termed Sabbatical. This year was obſerved with great ſolemnity by the Jews, and was chiefly remarkable for the conſiderable alteration it occaſioned in their properties and eſtates; for at this time, by the expreſs command of their law, all ſlaves were made free, and all lands that had been ſold or mortgaged, reverted to their ancient owners.

The next diviſion of years that we are acquainted with, is of ſtill greater importance in chronology, as being abſolutely neceſſary to the right underſtanding of the Greek and Roman hiſtory. I mean the *Olympiads* and *Luſtra*.

The firſt of theſe was a method of computation in uſe among the *Greeks*, and of great note in chronology, as from them the *epocha* of the hiſtory of that memorable people takes its date. *Varro*, in his diviſion of the whole ſeries of time into three periods, begins the third or laſt, which he calls the æra of *true* hiſtory, from the firſt Olympiad.

Now, an *Olympiad* was a ſpace of four years, at the expiration of which the *Olympic* games were celebrated with great pomp and ſolemnity, near the city Olympia, in Peloponneſus; they were ſuppoſed to have been firſt inſtituted by *Hercules*, in honour of *Jupiter*.

The

The computation, by Olympiads, ſeems to have ceaſed after the 364th, which ended with the year of Chriſt 440; for after that we do not find them any more mentioned in hiſtory.

The *Luſtrum* is a *Roman* inſtitution, and was a diviſion of five years interval, meaning a period of *expiation*, or ſacrifice to the gods.

Epochas, as I have before obſerved, are certain fixed points of time, from which men begin their computations, and to which, in all their calculations, they refer. Hence, by comparing different tranſactions with the epocha, and tracing their various intervals and diſtances, we can aſcertain the years in which they happened, and aſſign them their place and order in the ſucceſſion of time. But it is evident, that all this can regard only the epocha immediately under conſideration. Where the different epochas are uſed, as is frequently the caſe in hiſtory, we muſt neceſſarily have ſome common meaſure by which to compare them together, and diſcover the relation they bear to each other. The Creation of the World, the Deluge, the Olympiads, the Building of Rome, and the Birth of *Chriſt*, are all celebrated æras in hiſtory, and often made uſe of in the computation of time. It is apparent, however, that in reading the tranſactions of different nations which may be referred to thoſe or other æras, we ſhall not know how

how to connect them together, or comprehend the coincident times, unleſs we firſt eſtabliſh ſome general period, which may ſerve as the ſtandard and common receptacle of all other epochas. This done, we have only to reduce the ſeveral æras to it, which throws the whole train of paſt events into one connected ſeries, and exhibits them in their diſtinct order of ſucceſſion.

Such a ſtandard as that we are ſpeaking of, is the *Julian* period; ſo called from its author, Julius Cæſar.

And as there is nothing more important in chronology, than to have a diſtinct comprehenſion of this period, and to ſee the manner of its application, I ſhall, in order to give a clearer inſight into the ſubject in hand, explain,

1. The cycles of which it is compoſed.
2. How, by the combination of cycles, ſuch a meaſure of time is framed, as preſerves a happy diſtinction in all its parts, ſo that they are in no danger of being confounded or miſtaken one for another.
3. I ſhall demonſtrate the uſe of this period in regulating the ſeveral epochas and computations of chronology.

The word cycle, is derived from a Greek word *kuklos*, a hoop or circle, and means certain periods or ſeries of years, proceeding in an orderly ſucceſſion from firſt to laſt, when they are ſuppoſed to begin again, and ſo to go the ſame

round

round in a conſtant train of revolutions of the ſame tenour. Thus the continued ſeries of Sabbatical years among the *Jews*, is called the Sabbatical Cycle, which conſiſted of ſeven years; as a ſyſtem of 50 years continually recurring made their Jubilian Cycle. In like manner, if we ſuppoſe the ſun and moon to ſet out together from any point of the zodiac, and after a certain ſucceſſion of years to meet again in the ſame point of the heavens; as this event muſt always happen upon the like revolution of years, this number of years would neceſſarily form a cycle, by which to determine for ever the coincidence of theſe two luminaries in the heavens; and accordingly this is the intent of the lunar cycle, or cycle of the moon, of ſuch great note in chronology.

The ancient form of the year among the Jews and Greeks, was properly lunar, yet as they were alſo obliged to regard the ſolar motions, hence aroſe the neceſſity of *intercalations*, and of eſtabliſhing a cycle to regulate and adjuſt theſe interculations.

Intercalation (a word of Latin derivation) means the putting ſomething in between others, as with us, a day in the month of *February*, between the 24th and 25th days in every four years, or in what we call leap-year: thus the Jews, in like manner, uſed to add a 13th month to their lunar year, at the end of every 2 or 3

years; becauſe in the cycle of 19 years, there are ſeven of thirteen months each, and the reſt but 12 months; and this was done between February and March, and was called the firſt and ſecond *Adar*.

The Jewiſh years, therefore, though properly and ſingly conſidered, were indeed lunar; yet, by theſe intercalations, and their keeping their months conſtantly fixed to the ſame ſeaſons, they became, in their collective ſums, really ſolar; the cycle of the ſun being 28 years, and that of the moon 19 lunar years, and ſeven intercalary months, or 19 ſolar years. The ſame thing happened alſo among the *Greeks*, and for a ſingular reaſon, *viz.* the adjuſting the lunar reckoning to the ſun's courſe, and thereby preventing their months from receding too far from the ſeaſons, in order that the feſtivals which they were obliged to obſerve, might fall at thoſe proper periods when they *could* be kept: for inſtance, to illuſtrate my meaning,—the feaſt of the *Paſſover* (our Eaſter) was fixed to the middle of the ninth *Niſan* (anſwering to our March) and ordered to be celebrated by the eating of the Paſchal Lamb, and the offering up the wave ſheaf, as the firſt fruits of their barley harveſt. The feaſt of Pentecoſt (our Whitſuntide) was kept on the 50th day, after the 16th of *Niſan*, the day on which the wave ſheaf was offered; and celebrated by the offering of the two wave loaves,

loaves, as the firſt fruits of their wheat harveſt. And, laſtly, the feaſt of Tabernacles, always began on the 15th of *Tiſri*, (our September) being fixed to the time of gathering in the fruits of the earth.

It is evident, therefore, that the Paſſover could not be obſerved, till the lambs were grown fit to be eaten, and the barley to be reaped; nor the Pentecoſt, till the wheat was ripe; nor the feaſt of Tabernacles, till the in-gathering of the vineyard and olive yard was over; for, otherwiſe, they could not have procured the offerings neceſſary for the obſervance of theſe feſtivals.

This was alſo the caſe with the Greeks, as I before hinted, in order to adjuſt their feſtivals, particularly the Olympiads, to the ſolar reckoning.

When the Jews were diſperſed over all nations, ſo as neither to have proper opportunities of making the requiſite obſervations, nor means of communicating them when made, it was then found neceſſary to eſtabliſh fixed and ſtated rules of intercalation, that ſo they might be every where uniform therein; and upon this occaſion it was, that the cycles and aſtronomical calculations of the Greeks, were, with ſome little variation, introduced among them; the leading principles of which were as follow:

They were directed by an oracle to obſerve all their ſolemn ſacrifices and feſtivals, according to the number Three, (*kata tria*, in Greek); and this being interpreted, to mean *years*, *months*, and *days*, and that the years were to be reckoned according to the courſe of the ſun, and the months and days according to that of the moon; they thought themſelves, for that reaſon, obliged to obſerve all thoſe ſolemnities, at the ſame ſeaſons of the year, and on the ſame month, and on the ſame day of the month; and therefore endeavours were made to bring all theſe to meet together, that is, to bring the ſame months, and all the days of them, to fall as near as poſſible within the time of the ſun's courſe. And this was to be done by intercalations; ſeveral modes of which were tried, as well as different cycles, and ſucceſſively improved upon, till, at length, the *Metonic* cycle of 19 years took place, ſo called from *Meto* an *Athenian*, the inventor of it. This great aſtronomer found, by calculation, that if the ſun and moon were ſuppoſed to ſet out together from any point of the zodiac, after 19 ſolar revolutions, they would meet again in the ſelf ſame point, and begin a new period, exactly agreeing with the former.

Theſe 19 ſolar revolutions he found to contain 235 lunations, which make 19 lunar years, and ſeven lunar months, to be added to them by ſeven

ven intercalations; ſo that the whole cycle conſiſted of 12 lunar years of 12 months each, and ſeven intercalated years of 13 months; which correſponding to 19 ſolar or *Julian* years, the new and full moons of that ſpace, not only return to the ſame days of the *Julian* year, but nearly to the ſame hours of the day. A courſe of obſervation therefore, determining the days on which the new full moons happen during one revolution of this cycle, will alſo ſerve for the next revolution of the ſame, and ſo on in ſucceſſion.

This cycle was very famous in ancient chronology, and is known among us under the name of the Cycle of the Moon, or Golden Number.

Upon the ceaſing of the Greek ſolemnities, the uſe of this cycle alſo ceaſed, and ſo continued for ſeveral centuries, till at length, after the council of *Nice*, the Chriſtians introduced it into their calendar, and made uſe of it in ſetling *Eaſter*, and the other moveable feaſts.

So great a value was ſet upon that cycle, on account of its great utility in eccleſiaſtical computations, that the numbers of it were written, in the ancient calendars, in golden letters; from whence, in our preſent Almanacks, that number of this cycle which accords with the year for which the Almanack was made, is called the Golden Number.

The Julian period, beſides the lunar cycle, comprehends alſo two others: that of the *ſun*, as it is commonly called, and the cycle of *Indiction*. The ſolar cycle is ſo called, not from expreſſing any number or ſeries of ſolar revolutions, but becauſe, by its help, we know the dominical letter, or the character of Sunday.

The Cycle of Indiction is a ſyſtem of 15 Julian years, continually recurring. It is ſuppoſed to have been inſtituted, to mark or point out the period of certain tributes and taxes which the Roman ſubjects had to pay.

To find the golden number for any year whatever of the Chriſtian æra, may be eaſily done by the following plain rule:

The firſt year of *Chriſt*, according to computation in old ſtyle, fell in with the ſecond year of the lunar cycle, and therefore, if to the given year of the Chriſtian æra you add one, and divide the ſum by 19, the quotient ſhews the number of revolutions of that cycle from the beginning of the ſaid æra, and the remainder, after diviſion, is the golden number required; but if nothing remain, the golden number is 19.

Suppoſe, for example, the golden number of the year 1746 were required; then 1746 added to one, makes 1747, and that divided by 19, gives 91 for the quotient, with a remainder of 18: and therefore 18 is the golden number for that

that year; and 91, the quotient, expreſſes the number of revolutions of this cycle from the beginning of the year preceding the birth of Chriſt.

To find the year of the ſolar cycle anſwering to any given year: Proceed thus;

The year of our Lord's nativity fell in with the tenth year of the ſolar cycle, and therefore, if to the given year of the *Chriſtian æra*, you add 9, and divide the ſum by 28, the quotient expreſſes the number of revolutions of the cycle, from the ninth year before Chriſt, and the remainder gives the year of the ſolar cycle; but, if nothing remains, then does the given year anſwer to the 28th, or laſt of this cycle.

At the time of the reformation of the calendar, the year 1582 was reckoned the tenth year of the indiction; whence, by numbering back, you will eaſily find the firſt year of this cycle is connected with the third before Chriſt; ſo that by adding three to the given year of *Chriſt*'s nativity, and dividing the ſum by 15, you will find the year of the indiction, in the ſame manner as you did before that of the lunar and ſolar cycles.

In the language of Chronologers, the general name of any cycle is not only applied to the entire ſyſtem of years of which the cycle conſiſts, but alſo to every year of the ſaid ſyſtem. Thus the 14th year, for inſtance, of the ſolar period,

is denominated indifferently, either the 14th year of the ſolar cycle, or the 14th ſolar cycle. In like manner, the lunar revolutions; any year, as the 5th, is called the 5th year of the lunar cycle, or the 5th lunar cycle; and ſo for the Indiction.

I ſhall now deſcribe how the cycles are applied, in their compoſition of the general ſtandard of epochas.

As, in the language of Chronologers, a round, or revolution of years, makes, what they call, a cycle; ſo a round, or revolution of cycles, makes, what they call, a period. And as there are various and manifold compoſitions of cycles in this ſcience, ſo are there, of courſe, various and manifold periods. But I ſhall here confine myſelf wholly to the conſideration of the *Julian* period, it being the moſt important in all chronology, and which, if well underſtood, will render every other part of this ſcience eaſy and familiar.

This period is compounded of the three cycles already explained; but, to enable you the better to underſtand its origin, frame, and utility, attend to the following obſervation.

I here ſuppoſe the three cycles of the ſun, moon, and indiction, to begin together, in ſuch manner, that the firſt year of the ſolar cycle be alſo the firſt year of the lunar cycle, and the firſt of the indiction; then, as the cycle of indiction termi-

terminates in 15 years, and muſt begin anew, it is evident that the 16th year of this ſeries will be the 16th year of the ſolar and lunar cycles, and the firſt year of the ſecond indiction.

Again, as the lunar cycle revolves into itſelf after 19 years, if you advance to the 20th year of the ſeries, you will have 20 for the character of the ſolar cycle, one for that of the lunar, and five for the indiction.

Proceeding on in this manner, you will find every year exhibit different cycles; and if you continue the progreſſion till ſuch time as cycles return again in the ſame order as when you firſt ſet out, that is, till the firſt year of theſe three ſeveral cycles coincide and fall together, you will find that this cannot happen till after an interval of 7980 years; for then, and not ſooner, will the ſame order of cycles return, and begin a ſecond period of the like kind with the former.

This ſyſtem of years, comprehending all the poſſible changes of theſe cycles, may alſo more readily be found by multiplying the three cycles continually into one another, *viz.* 28, 19, and 15; for the product thence ariſing muſt neceſſarily be the ſame with the aforeſaid period.

What is particularly happy in the conſtitution of this period, and ariſes evidently from the manner of generating it as above deſcribed, is, that all the years of it are diſtinguiſhed by their peculiar

culiar cycles; inſomuch that one year of the whole period has the ſame cycles with any other year thereof. For, we have ſeen that the ſame order of cycles does not return till the period is elapſed, and a new one of the ſame kind begins. By this means, all the years of this period are accurately diſtinguiſhed; ſo that if the cycles are duly marked it is impoſſible to miſtake one for another. This, *Joſeph Scaliger* obſerving, and how uſeful ſuch a meaſure of time might be, if applied to the purpoſes of Chronology, thought of adapting the years of it to the *Julian* form, making them begin from the 1ſt day of *January*; and thence gave it the name of the Julian *Period*.

The cycles of which it was compoſed were alſo taken according to the manner and computation in uſe among the *Latins*; and as, by their joint conſent, the firſt year of the Chriſtian æra had ten for the character of the ſolar cycles, two for that of the lunar, and four for the indiction; which three cycles correſpond with no other year of the Julian period but the 4714th, he connected this very year with the firſt of the vulgar Chriſtian æra, and thereby laid a foundation for applying the whole ſeries of time, both before and after this great event, to the other years of his celebrated period.

Having thus explained the nature, origin, and properties of this univerſal meaſure of time, I

ſhall

ſhall now proceed to ſhew how we are to apply it for the univerſal purpoſes of Chronology. And, in the firſt place, let me obſerve, that it affords a general and eaſy rule for the finding of any of the three cycles. For, as the firſt year of the period is alſo the firſt year of every cycle in it, by dividing any year thereof by the numbers expreſſing the cycles, *viz.* 28, 19, and 15, the reſpective quotients will ſhew the number of the cycles elapſed from the beginning, and the remainders will be the years of the ſeveral cycles correſponding to the ſuppoſed year of the period.

Thus, if it was required to find the characters of the three cycles for the the 6467th year of this period, which anſwers to the year of our Lord 1754, divide 6467, the given year of the Julian period, by 28, the cycle of the ſun, and the quotient gives the number of rounds of the ſolar cycle that have elapſed from the beginning of the period, and the remainder is the preſent year of the ſaid cycle. In like manner, if you divide by 19, the quotient will expreſs the rounds of the ſolar cycle, and the remainder will be the golden number. The ſame method of proceeding, if you divide by 15, will ſerve for the indiction. This rule is univerſal, and will ſerve for the years before Chriſt as well as after, by referring them to the *Julian* period. By thus knowing how to find at any time the

years

years of the cycles, you can, by the help of the calendar and the other uſual tables, find the dominical letter, the new and full moons, with all the other eccleſiaſtical calculations depending thereon.

I now proceed to what is my chief deſign in this explication of the *Julian* period, *viz.* the connecting it with the ſeveral epochas of hiſtory, that thereby we may be enabled to compare them together, and view the whole current of time in a regular ſucceſſive courſe.

We have already ſeen that the firſt year of the Chriſtian æra coincides with the 4714th of this period, and that therefore 4713 years of it were elapſed when the epocha of Chriſt's nativity began. If therefore to any year of our Lord's nativity we add 4713, that will be the year of the Julian period, anſwering to the given year of the Chriſtian æra.

Now, as the year of our Lord's nativity is univerſally known, and in common uſe, nothing can be eaſier than this connexion; and ſince it is uſual among Chriſtians to refer all other epochas to this, the manner of reducing them to the univerſal period is equally obvious.

I would know, for inſtance, in what year of the Julian period the epocha of the *Hegira* begins. This is the celebrated æra in uſe among the Mahometans and Arabs, which took its riſe on occaſion of Mahomet's flight from Mecca.

Now,

Now, the firſt year of the *Hegira* coincides with the 622d of our Lord. Add this to 4713, and you have 5335, the year of the Julian period, in which the epocha of the *Hegira* began.

In like manner, if I wiſhed to know in what year of the *Julian* period the *Norman* conqueſt happened, this being an epocha of great note in *England*, to 1066, the year of Chriſt, anſwering to the ſaid conqueſt, I add 4713, and the ſum 5779 gives the year required.

This ſhews the method of reducing the years and epochas *after* Chriſt's nativity to the Julian period; for thoſe *preceding* it, ſhewing the year before Chriſt in which any epocha begins, if you ſubtract that from 4714, the remainder will be the year of the Julian period, correſponding with the firſt year of the ſaid epocha. Having now connected the beginning of the epocha, it will be eaſy to connect its ſubſequent years, as there is nothing more required to it but a bare addition of theſe years. To illuſtrate this matter by an example. The *Olympiads* began in the 776th year before Chriſt, which, ſubtracted from 4714, leaves 3938 for the year of the Julian period. Again, *Rome*, according to the chronology of Archbiſhop Uſher, was built in the 748th year before the nativity of our Lord. Now 748 taken from 4714 as before, leaves 3966, the year of the Julian period, correſponding to that of the foundation of Rome. In the

ſame

ſame manner, may any other epocha of former ages be connected with this univerſal ſtandard of computation; and the great advantage of ſuch a reduction is this, that we can thereby compare the ſeveral epochas together, and determine coincident times, and the coeval tranſactions of different nations, which, as I obſerved before, is bringing the whole train of paſt events into one connected ſeries, and exhibiting them to the mind in a diſtinct order of ſucceſſion. For knowing, by the foregoing calculation, that the Olympiads began in the 3938th year of the Julian period, and that Rome was founded in the 3966th year of the ſame; I ſee that, in the regular courſe of time, there is a difference of about 28 years between theſe two epochas.

When therefore I read, in the hiſtory of Greece, that during the 112th and 113th Olympiads, Alexander was puſhing his conqueſts in Aſia, and carrying his victories even into the heart of India; and learn likewiſe, from the Roman hiſtorians, that about the year of the city, 420, *&c.* Papirius Curſor was ſubduing the Samnites, and laying the foundation of the Roman greatneſs: obſerving the times here nearly to coincide, and fall within about the ſame years of the *Julian* period, I thence gather that at the very time Alexander was eſtabliſhing the *Macedonian* greatneſs in the Eaſt, an empire was riſing in the Weſt, reſerved by Providence

vidence to cruſh the tyranny he was forcing upon nations, at the expence of ſo much blood and treaſure.

But beſides the comparing of epochas, determining the coincident times of hiſtory, it is by the Julian period alone that different chronologers, who proceed upon different computations, can underſtand one another.

One farther advantage of the Julian period is this, that as with reſpect to paſt tranſactions, it is thus a common ſtandard for comparing them together, and adjuſting the different ſuppoſitions about them; ſo with reſpect to thoſe that are to come, it may be made an infallible criterion to determine without a poſſibility of error, the years in which they happen.

It is proper alſo to obſerve, that the Julian period when traced to its beginning, runs ſeveral hundred years beyond the creation; and that *Scaliger*, when he firſt invented it, might eaſily have accommodated its years to the years of the world; but then the cycles of his period would not have been the ſame with the cycles then in uſe.

SECT.

SECT. IV.

Hiſtory.

I SHALL divide Hiſtory into two parts, Ancient and Modern, *i. e.* from the creation to the birth of our Saviour, and from that period to the year 1801.

Having, in the laſt ſection, given the general out-lines of *Chronology*, upon which the proper ſtudy of hiſtory is founded, I ſhall now proceed, as conſiſtently as poſſible, to point out to my readers the beſt method of acquiring the knowledge of hiſtory.

If we conſider TIME as running forward in a continual train of ſeveral thouſand years, from the creation of the world to the birth of Chriſt, and were to take an account of the hiſtory of mankind during that long interval, it is evident that our narrow minds are by no means able to comprehend diſtinctly the tranſactions of ſo many ages, or view them in a due order of ſucceſſion, unleſs we begin by dividing this large period into ſeveral leſſer ſpaces and intervals. For the occurrences that happen within each of theſe will be the more eaſily retained, and may be afterwards united by the mind

mind, into one general plan: ſuch a diviſion as this does the conſideration of epochas afford. For, as they are certain fixed points of time, diſtinguiſhed by ſome memorable event, the mind conſiders them as convenient reſting-places, from whence to take a view of whatever has happened remarkable before or ſince. Now, the epochas of ancient hiſtory being all removed from one another by a greater or leſs term of years, the ſeveral intervening periods may be very naturally conſidered as ſo many ſubdiviſions of the general courſe of time.

It ſhould therefore be the firſt care of a pupil ſtudying hiſtory, to get a diſtinct notion of theſe intervals, that is, of the ſpaces of time between epocha and epocha; and, at the ſame time, to acquaint himſelf with the moſt remarkable tranſactions that have happened during every period in its proper order.

For thus he preſents the mind at once with a general plan of the whole body of ancient hiſtory; and diſpoſing paſt events in a regular ſeries, by this means avoids perplexity and confuſion.

As in ſtudying the geography of any nation or kingdom, we firſt get acquainted with its general regions; and then, fixing upon ſome remarkable cities in each of theſe, diſpoſe of the other towns around them, every one according to its diſtance; that the mind, by proceeding

thus, from province to province, may take a progreſſive view of the whole country, and comprehend it in all its parts. Such muſt be the method of hiſtory.

We muſt divide it into certain parts, or intervals, each beginning with ſome memorable occurrence; and then getting acquainted with the moſt remarkable tranſactions of every period, diſpoſe of the other events before or after them, according as they fall out in the time of the hiſtory.

In order to avoid confuſion, it is neceſſary, at firſt, for the pupil to confine himſelf to a moderate number of diviſions, which, when well digeſted, may be afterwards ſubdivided into what leſſer periods he pleaſes.

It is not my intention here to enter into the details of hiſtory; indeed, the limits of my plan do not admit of it; but, if this volume ſhould be well received by the public, I mean, in a future work, to give a regular abſtract ſeries of it from the creation of the world to the year of our Lord 1800, *upon a plan different from what has hitherto appeared*, and completely adapted to facilitate the knowledge of it to young people, by its being ſo arranged, and diveſted of all heavy tedious matter, as to render it a more pleaſant and leſs perplexed ſtudy than it is at preſent. I ſhall, however, in the mean time, point out two or three plans of diviſion, for the guidance of

of thoſe who wiſh to read hiſtory with advantage.

I ſhall firſt lay before the reader the heads of a ſhort view of ancient hiſtory, from the creation of the world to the birth of Chriſt; and, proceeding in it according to the plan above mentioned, I ſhall divide that whole interval into ten parts; referring the reader, for the detail of them, to the Preceptor, vol. i. p. 361, of ſecond edition.

1. *Interval.* Comprehends the duration of the old world, or from the creation to the deluge, which includes 1656 years.
2. ——— From the deluge to the calling of Abraham, 426 years.
3. ——— From the calling of Abraham to the departure of the children of Iſrael out of Egypt, 430 years.
4. ——— From the departure of the children of Iſrael out of Egypt to the deſtruction of Troy, 308 years.
5. ——— From the deſtruction of Troy to the laying the foundations of the Temple under Solomon, 172 years.
6. ——— From the foundation of the Temple to the building of Rome, 258 years.

7. *Interval.* From the building of Rome to Cyrus, 208 years.
8. ——— From Cyrus to the overthrow of the Perſian empire, by Alexander the Great, 206 years.
9. ——— From the fall of the Perſian empire to the defeat of Perſius, when Rome became the miſtreſs of the world, 162 years.
10. ——— From the deſtruction of the kingdoms of Macedon, under Perſeus, to the beginning of the Chriſtian æra, about 168 years.

Under theſe ten diviſions, an abſtract of the general hiſtory of each interval is given, and notice taken of thoſe æras which were of principal note in ancient time.

This may be called a general map of ancient hiſtory; and after it is well underſtood, the pupil may apply to any particular parts of it with advantage.

The great empires will lie open before him, and Rollin's Ancient Hiſtory will be his beſt inſtructor.

Le Clerc's Compendium of *Hiſtory*—*Helvicus* and *Iſaacſon's Chronological* Tables—*Hearne's Ductor Hiſtoricus*—*Wheare's* Lectures—*Rawlinſon's Directions for the Study of Hiſtory*—*Cave* and *Dupin*—*Baronius* and *Fleury*, are uſeful guides to the ſtudy

ſtudy of hiſtory; and the four laſt principally for eccleſiaſtical hiſtory;—*Strauchius's* Breviarum Chronologium, will alſo be found a very uſeful guide.

Dr. *Rutherford*'s View of Ancient Hiſtory, divided into lectures, will alſo be a uſeful guide; as a larger work, *Guthrie*'s Hiſtory of the World, in 12 vols. which includes the hiſtory of the European and Aſiatic nations, from the creation to a very recent period, is alſo an admirable Guide: and I ſhall now lay before the reader a chronological diviſion of intervals adapted to the ſtudy of that work.

1. *Interval.* From the creation of the world, 4004 years before Chriſt to the flood, which happened 2348 before Chriſt, including 1656 years.
2. ——— From the flood to the death of Joſeph in Egypt, 1635 years before Chriſt, including 713 years.
3. ——— From the death of Joſeph to the death of Moſes, 1452 years before Chriſt, including 183 years.
4. ——— From the death of Moſes to the taking of Samaria, when the ten tribes are carried into captivity, and the kingdom of Iſrael ends,

720 years before Chriſt, including 732 years.

5. *Interval.* From the taking of Samaria to the taking of Babylon by Cyrus, when that kingdom ends, 538 years before Chriſt, including 182 years.

6. ——— From the taking of Babylon by Cyrus, to the death of Alexander the Great at that city, when the empire is divided by his generals into four kingdoms, 323 years before Chriſt, including 215 years.

7. ——— From the death of Alexander the Great to the deſtruction of Carthage by the Romans, 146 years before Chriſt, including 177 years.

8. ——— From the deſtruction of Carthage to the birth of our SAVIOUR, including 146 years.

It is by brief abſtracts that the teacher ſhould begin to inſtruct his pupil in Hiſtory, enlarging afterwards upon the ſeveral intervals, as he advances in age, in ſtrength of memory, and in judgment.

Hiſtory muſt be ſtudied methodically, and ſtriking

ſtriking points or proper diviſions of the greateſt events, muſt be formed, from whence to lead the memory, ſtep by ſtep, progreſſively and certainly, through the whole connected ſeries of occurrences, whether of univerſal hiſtory, or only that of one empire or kingdom;—without ſame regular guide of this kind, the pupil's mind would be perplexed and his ideas confuſed.

I think if he was made to learn an abſtract of occurrences during each interval, by heart, it would be the beſt way to impreſs the knowledge of the regular ſeries of hiſtory upon his mind. The two laſt intervals of the ſecond diviſion are of peculiar importance to claſſical pupils.

Another mode of dividing ancient hiſtory is this; making the creation, and the ſucceſſive eſtabliſhment of the four great empires of Aſſyria, Perſia, Greece and Rome, with the birth of our Saviour, the reſting points, or hiſtorical marks; as in dividing land, we call the ſmall poſts that diſtinguiſh the ſeveral portions, *land marks*: for inſtance;

1. *Interval.* From the creation of the world to the foundation of the Aſſyrian monarchy, 2059 years.
2. ——— From the foundation of the Aſſyrian monarchy to that of the Perſian empire under Cyrus, 1409 years.

3. *Interval.* From the foundation of the Perſian empire, to that of Greece, or the Macedonian, as it is ſometimes called, 213 years.

4. ——— From the eſtabliſhment of the Grecian empire to that of Rome, 155 years.

5. ——— From the beginning of the Roman empire to the birth of Chriſt, 167 years.

For this diviſion, as I have before obſerved, ROLLIN'S *Ancient Hiſtory* will be the beſt guide; and the abridgement of it will be the propereſt for the young pupil to begin with; he may afterwards ſtudy Rollin at length.

In regulating the ſucceſſion of the great empires, the moſt natural order ſeems to be, that which repreſents them riſing, one after another, and each eſtabliſhing its power and greatneſs, upon the entire ruin of that which went before: indeed this is the only proper method that can preſerve a due order, and a diſtinct plan, in reading ancient hiſtory.

Thus, though upon the death of Sardanapalus, the Aſſyrian monarchy was diſſolved; yet, reviving again in the kings of Nineveh and Babylon, that revolution was not conſidered as the æra of a new empire. But, when the power of the Aſſyrians was utterly broken, and the dominion

minion of Aſia wholly transferred to another people by Cyrus; there the beginning of the Perſian empire is properly fixed.

In like manner, though the Perſians were greatly weakened under Xerxes, and his ſon Artaxerxes Longimanus, and forced to accept of ſuch terms of peace as Greece was willing to grant them; inſomuch that the Greeks, under Simon, may be juſtly ſaid to have given law to the Perſian empire; yet, as that monarchy ſtill ſubſiſted under kings of its own, and was not finally ſubdued till Alexander paſſed with an army into Aſia, and overthrew Darius in the plains of Arbela, all hiſtorians extend its duration to that period.

But, after that defeat, the ſovereignty of Aſia paſſing from the Perſians to the Macedonians, here begins the third great empire, which continued under Alexander and his ſucceſſors. The ſame reaſons induce hiſtorians to lengthen out the times of the Macedonian greatneſs to the defeat of Perſeus, by Paulus Emilius: for though the Romans had long before given laws to Greece, and even to the kings of Macedon, yet that kingdom was not utterly deſtroyed till the time of the above overthrow; when becoming a province of the Roman empire, all the power and dominion that had formerly belonged to it, was transferred to the conquerors, and Rome thereby

thereby advanced to the ſovereignty of the world.

Thus we have a regular ſucceſſion of empires, eſtabliſhing themſelves upon the ruins of each other in turn.

The teacher having thrown together, in an abſtract, all the material tranſactions of the different nations of the world; and by referring them, as near as poſſible, to the years in which they happened, the pupil may acquire a pretty diſtinct notion of the coincident periods of hiſtory; and by keeping ſuch a general plan conſtantly in mind, he will be enabled to read either ancient or modern writers upon this ſubject, with all the advantage to himſelf he can deſire.

For whether they make choice of a longer or ſhorter portion of time, within which to limit the detail of tranſactions, or in whatever order different authors occur to his ſtudy, the knowledge he has of the general courſe of ages, and to what part of univerſal hiſtory every particular period belongs, will preſerve all his acquiſitions unconfuſed, and enable him to digeſt his whole treaſure of reading under thoſe heads and diviſions to which each part properly refers.

Nor is this merely a trifling advantage; for men, according to their different views and aims in life, find it their intereſt ſometimes to apply

apply themſelves more particularly to one part of hiſtory, and ſometimes to another; in which caſe nothing is more uſeful than ſuch a general view of things as may enable them to connect and join together thoſe ſeveral parts of knowledge, which intereſt or neceſſity has at different times added to their ſtock of learning.

It is proper for me further to obſerve upon the ſubject of ancient hiſtory, that beſides the hiſtory of the four great empires, ROLLIN and other writers on the ſubject, give thoſe of the Egyptians, Babylonians, Medes, Phœnicians and other nations, which made a figure during the ſeveral periods of thoſe empires, and to which the pupil may refer, either in the abridgement or in the work at length.

A very effectual method of teaching hiſtory is to make the pupil firſt write over the diviſions and abſtract account of the ſeveral intervals, and if poſſible, get them by heart, and afterwards he may write over, or tranſlate from French into Engliſh, Rollin's Abridged Ancient Hiſtory, or any other that the teacher may put into his hands.

In beginning to ſtudy hiſtory, the pupil ſhould not have too much at a time given him to learn; and probably it would be the better way, if he is deficient in memory, to make him only give an account at firſt of what he has been reading, *in his own words*, without attempting to recite even the abſtracts

abſtracts by heart. It is the teacher's buſineſs to ſmooth the road to learning, not to impede it. I think the peculiar features of the preſent times juſtify me ſtrongly in recommending to maſters and teachers, as well as to parents, the propriety and neceſſity of inſtructing youth thoroughly in ancient hiſtory in particular, that they may learn the cauſes of the riſe and fall of empires and individual nations; trace the ſources of the ſucceſs that occaſioned the former, and the evils or misfortunes that brought on the latter.

There they will learn, that nations juſt emerging from a ſtate of barbarity, by their hardy unbroken courage, the natural conſequence of ſimplicity and frugality of life, raiſed themſelves into *vaſt empires*; while mighty kingdoms and commonwealths, and even immenſe empires, through luxury, avarice, and effeminacy of manners, gradually declined, ſunk to that level from which their conquerors, by a contrary conduct, had progreſſively, or perhaps rapidly riſen, and left nothing of their former glory and ſplendour behind them but the *name*. Witneſs Aſſyria, Greece, Macedon, Perſia, and Rome.

Of Modern Hiſtory.

IT is neceſſary to the proper underſtanding of modern hiſtory, that the pupil ſhould be well acquainted with ancient hiſtory; and that to comprehend thoroughly that of the European continent, and particularly of Germany and France, he ſhould read CÆSAR's Commentaries, and learn to know theſe modern nations by their ancient names of *Teutones, Cimbri, Gauls*, &c. In fact, CÆSAR will make him acquainted with the ſtate of all the continental nations, and of this iſland itſelf, a ſhort time previous to the birth of our Saviour; and it is of ſo much conſequence to the Pupil to underſtand him thoroughly, that I would always make it a point to have him write out a portion of it in Engliſh daily, till he had gone through it; and making him repeat to me, *vivâ voce*, what he had ſo written.

This he might be given to do at the ſame time that he is reading the hiſtory of England in abſtract.

In dividing modern hiſtory, into proper intervals for the pupil's guidance and aſſiſtance, I would do it in the following way:

1. *In-*

1. *Interval.* From the birth of Chriſt to the removal of the ſeat of empire, by Conſtantine, from Rome, to Byzentium, from thence called Conſtantinople, 328 years.
2. ——— From Conſtantine to the ending of the weſtern empire, 148 years.
3. ——— From the fall of the weſtern empire, to the conqueſt of England by William Duke of Normandy, 590 years.
4. ——— From the conqueſt to the diſcovery of America by Columbus, 426 years.
5. ——— From the diſcovery of America to the Reformation in England, 42 years.
6. ——— From the Reformation to the death of Charles I. 115 years.
7. ——— From the death of Charles I. to the Revolution, 39 years.
8. ——— From the Revolution to the American war, 86 years.
9. ——— From the American war to the meeting of the Imperial Parliament of the Britiſh iſles, about 26 years.

With reſpect to the abſtract hiſtories of England, France, Spain, Portugal, Germany, Holland,

land; and, indeed, all the European nations, the pupil cannot have a better guide than GUTHRIE'S GEOGRAPHICAL GRAMMAR.

SECT. V.

The Mathematics.

MATHEMATICAL learning is ſo very extenſive, in its nature and operations, and ſo various in its branches, that it would be impoſſible for me, in a work of this kind, to enter deeply into its principles, its properties, or the detail of its uſes.

My plan will only admit of applying the elementary and leading principles of it and its uſes, to the ſtudy and practice of young pupils, particularly thoſe deſigned for the Royal Navy.

I have, in a former diviſion of this work, treated of the education of ſea youth, and pointed out a plan of teaching for them, which I flatter myſelf, will be found to poſſeſs ſome utility as well as novelty.

In treating of the mathematics, in the brief way which the limits of my plan only permit me to do, I ſhall ſtill have them principally in view.

The

The word Mathematics is derived from a Greek word, *Mathesis*, ſignifying *diſcipline*, or *ſcience* in general; becauſe its uſes enter into almoſt all the ſciences; though, among the *ancients*, as well as the *moderns*, it was reſtrained to thoſe arts which were immediately concerned about number and quantity.

Mathematical learning being defined, it is a ſcience which teaches us the knowledge of NUMBER and QUANTITY, or that conſiders MAGNITUDES either as *computable* or *meaſurable*. It is divided into *ſpeculative* and *practical*; *pure* and *mixed*.

Speculative mathematics is the bare contemplation of the properties of things, and only relates to the ratio, proportion, or properties of numbers and figures, under their various combinations.

The *practical* applies the knowledge of theſe properties to ſome uſe in life; as the computing the intereſt of money, the value of goods, the diſtance of places, the quantity of land or liquor contained in a field or veſſel.

Pure, or *ſimple* mathematics, conſider quantity abſtractedly, and without any relation to matter or bodies.

Mixed mathematics conſider quantity as ſubſiſting in material ſubſtances; ſuch as length in a road, breadth in a river, height in a ſtar.

Pure

Pure or *ſimple* mathematics likewiſe either conſider quantity as computable, as *arithmetic*; or meaſurable, as *geometry* and *trigonometry*.

Mixed mathematics are very extenſive, and are diſtinguiſhed by various names, as the ſubjects they conſider, and the views wherein they take them, vary.

It is ſufficient to determine an art to be a branch of *mixed* mathematics, that *pure* mathematics are applicable thereto, *i. e.* that the art may be explained and demonſtrated from the principles of arithmetic and geometry, which are the two great leading branches of *pure* mathematics, ſuch are Mechanics—which conſider motion, or the laws of moving bodies.

Hydroſtatics—which conſider the laws of fluids, or of bodies gravitating in fluids.

Pneumatics—the air; with regard to the laws and menſuration thereof.

Hydraulics—the motion of fluids.

Optics—the knowledge and improvement of ſight or viſion.

Navigation—the art of guiding or conducting a ſhip from one place to another.

Perſpective—the images of objects, in order to delineate, or repreſent them.

Fortification, architecture, muſic, aſtronomy, geography, gnomonics, chronology, &c. are of the ſame deſcription, and are indebted to the ſcience of mathematics for their improvement and elucidation.

ARITHMETIC, which is a branch of *pure* or *ſimple* mathematics, teaches the power and properties of numbers; and under this head, beſides the uſual rules in Dilworth or Walkinghame, *algebra* and *logarithms* are ranked.

GEOMETRY, or the ſcience of extenſion, which is another branch of *pure* mathematics, teaches the meaſurement of *lines*, *ſurfaces*, and *ſolids*; all extenſion being diſtinguiſhed into *length*, *breadth* and *thickneſs*:

Or it may be defined the art of meaſuring bodies; to which end it conſiders three things that belong to a body, viz. *ſuperficies*, or *ſurface*, *lines*, and *points*; which, in plain terms, ſignify the *outſide*, the *edge*, and *corners* of a body, and ſo are real parts of it; but in the *ſenſe* that GEOMETRY uſes them, they do not properly belong to a body, and are only applied to it by our imagination; for if a body be dipped in water, though the water touches it every where, yet we may fancy a diviſion between it and the water, which imaginary diviſion is called a *ſurface*; and thus every imaginary diviſion begets a *ſurface* (between the parts ſo divided)—

a *ſur-*

a *ſurface* begets a *line*, and a *line* begets a *point*.

And ſince whatſoever divides a thing, terminates or bounds the parts ſo divided; therefore,

1. A *point* is termed the bound of a *line*.
2. A *line* the bound of a *ſurface*.
3. A *ſurface* the bound of a *body*.

The *firſt* having neither length nor breadth; the *ſecond* length without breadth; and the *third* length and breadth without depth.

TRIGONOMETRY (derived from two Greek words, and implying the meaſurement of a three ſided figure) is that part of geometry which treats particularly about determining the ſides and angles of triangles, whether plane or ſpherical, by having three things given, either all ſides, or ſides and angles, or angles only in ſpherics, a fourth (ſide or angle) may be found.

Plane Trigonometry is compoſed of *ſtraight* lines on a flat ſuperficies, and therefore the ſides of a triangle will be right lines; as uſed in maps and in navigation.

Spheric Trigonometry is compoſed of *circular* lines, as on the globes; where the ſides of a triangle are neceſſarily *arcs*, or curves of the ſphere.

LOGARITHMS are certain artificial numbers in arithmetical progreſſion, ſo fitted to the natural numbers, that if any two natural numbers are multiplied and divided by one another, the

correſpondent proportional numbers, or *indices*, anſwer all theſe concluſions by addition or ſubtraction. There are many tables of theſe numbers, and many methods for the making and finding them out, publiſhed by the moſt eminent mathematicians, and applied to the uſes of trigonometry, for the practical improvement of which many plans have been propoſed, and various inſtruments invented; but none ſo effectual, exact, and expeditious, as the *logarithmic* tables, for *numbers*, *ſines*, *tangents*, and *ſecants*.

It appears that the leading principles of theſe ſciences, comprehended under the general title of the *mathematics*, were known to, and made uſe of by, the *antediluvian* world, in the improvement of aſtronomy, geography, muſic, land-meaſuring, &c.; that *Noah* preſerved the knowledge of them from being extinguiſhed at the deluge with the human race, and handed them down to his poſterity, by whom they were gradually improved, till Euclid, about 284 years before Chriſt, brought the principles of them to that perfect ſtate of demonſtrable accuracy, and nicety, which has enabled latter ages to make the ſundry diviſions, ſubdiviſions, and improvements that are now in being, and from whence ſo many ſurpriſing concluſions, numerical, optical, and mechanical, have taken their riſe.

Among all the great mathematical ſciences that

that of Geometry is the moſt extenſive and the moſt uſeful.

It is by the principles of geometry that great truths (which can be proved) are demonſtrated with mathematical preciſion, and proved to a nicety by lines or figures, which are not only proper to repreſent to the imagination the relations between magnitudes, or between things ſuſceptible of more and leſs, as ſpaces, times, weights, motions, &c. but they may even repreſent things which the mind can no otherwiſe receive, ſuch as, for example, the *relations* of incommenſurable magnitudes, or great bodies that cannot be meaſured.

It is not however pretended, that all ſubjects men may have occaſion to enquire into, can be expreſſed by lines. There are many not reducible to any ſuch rule: thus the knowledge of an infinitely powerful, infinitely juſt GOD; on whom all things depend, and who would have all his creatures execute his orders, to become capable of being happy, is the principle of all morality, from which a thouſand undeniable conſequences may be drawn, and yet neither the principle, nor the conſequences can be expreſſed by lines, or figures.—MALEBRANCHE's Recherche de la Verité, tom. ii.

This ſcience had its riſe among the *Egyptians*, and was invented to meaſure or mark out their ſeparate portions of lands, in order to remedy that confuſion which their being frequently over-

flowed by the *Nile* occaſioned; but the Egyptians afterwards applied themſelves to more ſubtle reſearches, and from a very mechanical exerciſe, inſenſibly produced this fine ſcience.

Geometry is not barely uſeful, but even abſolutely neceſſary.

It is by the help of geometry that aſtronomers make their obſervations, regulate the durations of times, ſeaſons, years, and cycles; and meaſure the diſtance, motions, and magnitudes of the heavenly bodies.

It is by geometry that geographers ſhew us the magnitude of the whole earth, delineate the extent of ſeas, and the diviſions of empires, kingdoms and provinces.

It is from this ſcience that architects derive their juſt meaſures in the conſtruction of public edifices, as well as of private houſes. It is by its aſſiſtance that engineers conduct all their works, take the ſituations and plans of towns, the diſtance of places, and in ſhort the meaſure of ſuch things as are only acceſſible to the ſight.

It is alſo neceſſary in the military ſervice, in ſtudying fortification, in the drawing up an army in order of battle, and in marking out the ground for encampments; in making maps of countries; in taking the plans of towns, forts and caſtles; and to meaſure all kinds of dimenſions acceſſible or inacceſſible.

In

In ſhort, drawing, muſic, mechanics and all the ſciences, which conſider things ſuſceptible of more, and leſs, *i. e.* all the preciſe and accurate ſciences, may be referred to *geometry*; for all ſpeculative truths conſiſting only in the relations of things, and in the relations between thoſe relations, they may be all referred to lines, conſequences may be drawn from them; and theſe conſequences again being rendered ſenſible by lines, they become permanent objects, conſtantly expoſed to a rigorous attention and examination: and thus we have infinite opportunities, both of enquiring into their certainty, and purſuing them further.

I believe there are many young men, and by no means indifferent ſcholars too, who frequently have the word mathematics on their tongues, but, if aſked the queſtion, would be at a loſs to define, intelligibly, what the ſcience is.

Having therefore given a plain but comprehenſive definition of it, and putting out of the queſtion thoſe branches which relate to the other ſciences, I ſhall confine myſelf to general obſervations on the method of teaching the mathematics, and particularly geometry, with *Euclid* as the guide.

The firſt thing I would begin with in teaching the MATHEMATICS, would be to make the pupil thoroughly underſtand what that ſcience is, and make him learn by heart the definition,

and principal out-lines of it, in ſome ſuch way as I have juſt ſtated the matter. It is evident to every teacher, I hope, that the pupil ought firſt to be made to underſtand what he is going to learn; and that, as far as he can comprehend it, the uſes of it ſhould be explained to him.

But, is this the general practice in ſchools? I believe I may venture to aſſert, that it is not.

A boy is told that he is to begin the mathematics, and *Euclid* is put before him, to teach him the nature of geometrical lines and figures. In general, he is merely told to read over the definitions, poſtulates, and axioms, and to deſcribe the figures from the book, on paper; a certain portion of which being done, it is perhaps looked at by the maſter, to ſee if it correſponds with the original, and there the leſſon ends.

In three months after this boy has begun the mathematics, aſk him what that ſcience is, the uſes of it, and in what reſpects it operates upon, or is connected with other ſciences—he will not be able to tell you; but, with perplexity and confuſion of mind, muſt leave the explanation for you to give him.

I do not mean to ſay, that this is the practice in all ſchools; very far from it. There are eminent academies and mathematical ſchools, where

where the greateſt attention is paid to the elementary initiation and firſt principles of this ſcience; for, as I have ſo frequently, in the courſe of this work, obſerved, on the proper attention to firſt principles, every thing that is conducive to a right mode of teaching depends. I would obſerve to my pupil, that mathematical knowledge is divided into two great branches, *viz.* 1ſt, That of arithmetic, or figures; and, 2d, Geometry, or the meaſurement of bodies.

The nature of theſe I have before explained; in addition to which the teacher ſhould make the pupil particularly underſtand the nature of decimals and logarithms, as well as algebra; explaining to him the derivation and meaning of the words themſelves; the principles of the ſciences, and the uſes to which they are applied by mathematicians. For inſtance, I would ſtate to him, that the word DECIMAL, comes from the Latin word *decimus*, meaning the *tenth part*; and that it is that branch of arithmetic which conſiders units, or whole numbers reduced into decimal, or tenth parts, called Decimal Fractions; of which the denominators are decuples, or ten-fold numbers of 1; or they are a 1 with one or more cyphers; as 10, 100, 1000, 10,000, &c.; thus, $\frac{6}{10}$, $\frac{46}{100}$, $\frac{869}{1000}$, &c. are decimal fractions. But as the denominators of this ſort of fractions are always known, they are ſeldom

ſeldom expreſſed in writing; but the fraction is diſtinguiſhed by a point placed before it thus, .6, .46, .869; and as cyphers placed after integers increaſe their value decimally, ſo, being placed before a decimal, they decreaſe its value decimally; but, being placed before integers, and after fractions, neither of them is increaſed or diminiſhed.

Decimals are uſed by mathematicians to find the loweſt poſſible numerical proportions of whole numbers.

The word logarithm is derived from two Greek words, *logos*, a deſcription or account, and *arithmos*, a number.

In mentioning this, I do not recollect, in the whole courſe of my reading, to have ſeen the derivation of the word explained; and I do not believe that many pupils could tell me what the word logarithm means, or what the ſcience is.

I have before ſtated what the nature of this ſcience is, and by whom invented, to which I may add the following outlines of its operation.

Numbers or quantities are ſaid to be in arithmetical progreſſion, when they differ by the continual addition of a certain quantity; as

0. 1. 2. 3. 4. 5, *&c.* differing by the continued

tinued addition of 1, and 3. 6. 9. 12, &c. by the addition of 3.

Geometrical progreſſion is when numbers or quantities differ, by the continual multiplication of a certain quantity; as,

1. 2. 4. 8. 16. 32. 64, &c. by the continual multiplication of 2. And 1. 10. 100. 1000. 10,000, &c. by the multiplication of 10.

Now, take any ſeries of numbers in arithmetical progreſſion, beginning with 0; and a correſponding ſeries of geometrical numbers, beginning with 1, the former ſeries *will be* LOGARITHMS to the correſponding numbers in the latter; thus,

0. 1. 2. 3. 4. 5. 6. 7, &c. logarithms.
1. 2, 4. 8. 16. 34. 68. 128, &c. numbers. 32. 64.

Here 0. 1. 2. 3, &c. are the *logarithms* of 1. 2. 4. 8, &c. and the following properties are to be noticed. *Firſt*, If 2 and 3, the logarithms of 4 and 8, be added together, their ſum 5, will correſpond with 32, the product of 4 multiplied by 8. *Secondly*, If from 7, (the logarithm of 128) be ſubtracted 3 (the logarithm of 8) the remainder 4 will correſpond with 16, the quotient of 128 divided by 8. *Thirdly*, If 6 (the logarithm of 64) be divided by 2, the quotient 3 correſponds with 8, the ſquare root of 64. *Fourthly*, If the ſame logarithm be divided by 3, the quotient 2 will correſpond with 4, the cube root of 64.

It

It may be noticed here, that the logarithms of numbers between 4 and 8 are wanting; and that they muſt be greater than 2, but leſs than 3; and that the logarithms of the numbers between 16 and 32 muſt be greater than 4, but leſs than 5; and ſo of the reſt.

Now, the moſt convenient ſeries, to which all the modern tables of logarithms are calculated, is the following:

0. 1. 2. 3. 4. 5, *&c.* logarith.
1. 10. 100. 1,000. 10,000. 100,000, *&c.* numb.

In which all the logarithms of numbers between 1 and 10 are greater than 0, but leſs than 1; and all the logarithms between 10 and 100 greater than 1, but leſs than 2; between 100 and 1,000, greater than 2, but leſs than 3; and between 1,000 and 10,000 greater than 3 but leſs than 4, *&c.*

The logarithms in the above ſeries are called *indices*, which are often omitted, and the decimal part only put down.

The terms *chord*, *tangent*, *ſecant*, and *ſine* frequently occur in logarithmic arithmetic, and ſhould be thus explained by the teacher, the firſt time they come under the pupil's notice.

A chord is that line which is drawn from one end of an arc to the other.

A tangent touches the periphery (meaning in Greek the outward line of any figure) and is perpendicular to a diameter in the touching point.

point. It is derived from the Latin word *tangens*, touching.

A ſecant cuts the periphery, being drawn from the center, till it meets the tangent.—It is derived from the Latin word *ſecans*, cutting.

A ſine is half a chord-line or double the arc. It is derived from the Latin word *ſine*, without, or outer.

ALGEBRA is the ſcience of univerſal quantity, by which difficult queſtions in arithmetic and geometry are ſolved.

It is ſuppoſed to be derived from *geber*, an Arabic word, with the particle *al* annexed to it, and ſignifies in that language the reduction of broken numbers to whole numbers.

Others ſuppoſe it to be derived from the Spaniſh word *algebriſta*, a perſon who replaces diſlocated bones; obſerving that algebra has nothing to do with fractions, foraſmuch as it conſiders broken numbers as if they were entire, and even expreſſes its power by letters which are *incapable* of fractions.

The methods uſed in this ſcience are two, *viz.* *analytical*, or the taking of that which is inquired after, as if it were known, and then going back by conſequences, until it be found to be equal to ſomething really known: and, 2dly, the *ſynthetical*; that is, the taking that which is wanted or known, and thence proceeding, by conſequences, to

to the diſcovery of what is inquired after, or unknown.

In this art, quantities or numbers are repreſented by letters, and ſometimes by figures alſo, as there may be occaſion. The advantages of thus expreſſing quantities, are, that the numbers with their ſeveral operations, which in vulgar arithmetic would be loſt and ſwallowed up, in this, are ſo ordered and managed as to be preſerved diſtinct and in view, and at laſt produce a rule for reſolving, not only the particular queſtion propoſed, but in general any other of the like nature.

Geometry is the moſt important branch of the mathematics; and, in teaching it, I would recommended the following rules to the maſter's notice:

1ſt, To explain clearly to the pupil what the ſcience means, and what its uſes.

2d, To make him get by heart the definitions, poſtulates, and axioms, before he attempts to deſcribe a figure on paper.

3d, In repeating the definitions, to make him deſcribe, on a ſlate, each *line* and *figure* as he goes along; that ſo, upon their being named, he may readily deſcribe the figure.

4th, To explain to him the meaning, and, as much as poſſible, the derivation of all the names of the figures and terms in the ſcience; ſuch as,

A Tri-

A Triangle	Radius
Rhombus	Hypothenuſe
Trapezium	Corollary:

For except the pupil underſtands the full meaning of the terms he makes uſe of, he can have but a very imperfect knowledge or idea of the ſcience; I know that there is a very great overſight in this reſpect in ſchools.

5th, To make him thoroughly underſtand and practiſe with his compaſs, one propoſition before he attempts a ſecond; and to make him ſo much maſter of it, that he may be able to perform it without merely copying it from Euclid.

6th, In deſcribing the figure of any body to a young pupil, I would alſo ſhew him ſome ſolid ſubſtance correſponding with it in form, by which he will more completely comprehend the teacher's meaning. Demonſtration and conviction ſhould, as much as poſſible, accompany all inſtruction.

7th, It alſo appears to me, that teachers ſhould, as much as poſſible, ſimplify and reduce, to the level of their young pupils' underſtanding, the propoſitions, &c. in Euclid. They ſhould be diveſted of all ſuperficial and unneceſſary technical terms; and, as I before obſerved, the application of them ſhould always be illuſtrated by familiar correſponding objects: for inſtance, in deſcribing a circle, and taking its dimenſions and contents, ſhew them a round table,

table, and chalk the diameter, ſemi-diameter ſegments, &c. In deſcribing a ſquare, or an oblong ſquare, ſhew them a ſquare table, and practiſe them in the dimenſions and contents of it, &c.

In teaching the fundamental principles of geometry, it is neceſſary to proceed by ſlow ſteps, that each propoſition may be fully underſtood before another is attempted. For which purpoſe, it is not ſufficient, that when a queſtion is aſked, in the words of the book, the ſcholar likewiſe can, in the words of the book, return the proper anſwer; for, this may be only an act of memory, not of underſtanding; it is always proper to vary the words of the queſtion, to place the propoſition in different points of view, and to require of the learner an explanation in his own terms, informing him, however, when they are improper. By this method the pupil will become cautious and attentive, and the maſter will know with certainty the degree of his proficiency.

Yet though this rule is generally right, I would adviſe, that when the ſtudent cannot be made to comprehend any particular part, it ſhould be for that time laid aſide, till new light ariſes from the ſubſequent obſervations.

I have always found pupils take my meaning better by ſhewing them familiar correſponding

ponding objects, and by explaining the terms in a way adapted to their comprehenſion.

The ſix firſt books of Euclid are probably enough for moſt young pupils to be taught—more is not neceſſary or uſeful to a man of buſineſs at leaſt.

Thoſe who have a genius and inclination for mathematical knowledge, having been taught ſo far by a maſter, will be able to proceed by themſelves, either at the univerſity or at home.

The great importance of mathematical knowledge to *ſea youth* in the ſtudy of NAVIGATION is too obvious to require any comment; and therefore, in addition to the obſervations I have made, under the head of *Naval Education*, I would recommend to ſchool-maſters in the navy to make their pupils completely underſtand theſe out-lines that I have given, before they proceed to practiſe them in *Euclid* or Hamilton Moore. They ſhould alſo be made perfect in the *ſection* of Chronology and its uſes, previous to their beginning the latter author.

My reaſon for giving the derivation of words from the *Greek*, is, that almoſt all the ſciences, and their technical terms, are derived from that language.

CHAPTER VI.

SECT. I.

Of Religion: or, the Knowledge and Worſhip of the DEITY, *founded upon the Study of the Scriptures and the Works of Nature.*

UNDER this head, the neceſſity of every TEACHER of both ſexes *immediately* directing their pupils' attention to the GREAT FIRST CAUSE, through the channel of reaſon and philoſophy; and rendering all other learning, as much as poſſible, ſubſervient to *revealed* religion, is humbly attempted to be demonſtrated and enforced; as well as the method to be purſued in doing it, pointed out.

IN the preſent day, when there is ſuch a *manifeſt decline* in that ſtrict attention to religion and morality, which, even ſome few years back, was paid to them; and when, from the political convulſions of neighbouring nations, the bonds and ties of ſocial life are in danger of

of being loosened and violently torn asunder, it becomes a principal object of EDUCATION to instil into the minds of the rising generation, and there confirm, by every means in our power, as strongly and permanently as possible, a reverential, sacred regard for GOD, RELIGION, and that wise system of MORALITY, by which society is held together in mutual confidence, love, and peace; by the rule of which wise laws are made and executed for the common good; and the mind of man is formed to *justice*, *benevolence*, *industry*, and *economy*.

At such a period as this, it is, I say, more than ever the unquestionable duty of teachers of every description, to plant the seeds of piety to God, justice and benevolence to man, and a sacred regard to the laws of our country in the hearts of their youthful pupils of both sexes. It is in this point of view that the employment of teachers ought to be considered, at this moment, as of the utmost importance to society; for on their instructions, right or wrong, the political notions of the future man, will, in all probability, in a great measure, be formed.

Let parents and teachers carefully weigh this truth, and may they be wise enough, both by precept and example, to instil into young minds what is pious towards God, just to man, and favourable to the welfare of their native country, which, in the midst of a most ar-

duous ſtruggle, has had more to fear from the *poiſon* of internal falſe principles, than from all the united efforts of her external enemies.

To do away theſe fallacious principles, and inſtil thoſe of an oppoſite deſcription, is the duty of every true lover of his country.

Obſerve what enthuſiaſtic pains are taken in a neighbouring ſtate, by national inſtitutions formed purpoſely for youth, to inſtil, cheriſh, and foſter into active effect and exertion, thoſe principles which are the ſpring of all their actions, and have enabled them hitherto, not only ſucceſsfully to reſiſt the coaleſced powers of Europe, but, at this moment, to be conſidered as a match for them all.

Shall we then be behind hand with our rival foe, in what ſo much concerns the welfare and happineſs of this favoured little ſpot, which, ſtanding alone amidſt the tutelary waves of its ancient guardian ſeas, and greatly iſolated from all other nations, proudly rears its ſhining cliffs, beams on the diſtant continent, oppoſes by its thunder-bearing navy, an invincible barrier to the devaſtating ambition of its *natural* enemy, arreſts her rapid career of unjuſt aggrandiſement, and hurls deſtruction upon her fleets from the *Ganges* to the *Loire*, from the furtheſt bounds of the *Mediterranean*, to the moſt diſtant limits of the *Weſtern* ocean!

Ye

Ye patriot parents and inſtructors of our Britiſh youth! Oh, ſuffer not the ancient ſpark, kindled by your anceſtors into all the fire of liberty, and the glow of enthuſiaſtic love for their country, to be ſtifled or extinguiſhed at this moſt critical period, by any negligence or backwardneſs of yours, to cheriſh and keep the flame alive: let it be ſeen conſpicuous in the martial ardour of our riſing youth, in their willing defence of the conſtitution, handed down to us from our anceſtors (however it may ſometimes, from the preſſure of imperious circumſtances, become partially ſuſpended), and, in their prompt obedience to thoſe LAWS which are the ſafeguard of our perſons and property; of our defenceleſs mothers, wives, ſiſters, and daughters; of our aged fathers; and of all we love and value in ſociety.

Teachers! Piety to God, juſtice and benevolence to man, love for the country, reſpect to its laws, and ſubordination to its rulers, whoever they are, if legally and conſtitutionally called to act, are the fruits by which your fellow-countrymen will form a judgment of your exertions in your ſeveral ſtations about YOUTH.

I truſt the peculiar circumſtances of the times will be a very ſufficient apology for my thus prefacing what I have to ſay on the ſubject of inſtructing YOUTH in RELIGION. It is from a full conviction of how much the public happineſs

pineſs and welfare depend upon the right inſtruction of the riſing generation, and to what wide extent *parents* and *teachers* have it in their power to contribute to it, that I have preſumed to offer any thing of mine upon the occaſion. And if I have any thing further to add, it is a moſt earneſt recommendation, that, in ſchools for the poor, from the age of 8 to 12, and in public ſchools, boarding and day ſchools for the children of the affluent, from the age of 10 to 14 and upwards, the BIBLE and other religious inſtruction connected with it, may be made their principal ſtudy, and the ſtrict obſervance of the SABBATH an habitual practice. In this parents muſt cordially aſſiſt and co-operate with the teacher.

From the knowledge I have of the deficiency in that reſpect, I alſo conſider it as my duty at this critical period, particularly to ſuggeſt to the reverend the archbiſhops and biſhops of the UNITED KINGDOM, the neceſſity of a circular letter to all admirals and captains in the royal navy, through the medium of the ADMIRALTY, recommending to them to order the chaplains and ſchool-maſters of their reſpective fleets and ſhips, to make the young gentlemen and other boys read a portion of the BIBLE every Sunday, and have prayers read to them by the ſchool-maſter in his cabbin, where there is no chaplain on board.

A cer-

A certain ancient philoſopher being aſked what God was—requeſted a day to conſider of the anſwer he ſhould give—that day expired, he deſired another—the third day came, and he demanded the ſame indulgence; at which much ſurpriſe being expreſſed, and his reaſon for it aſked, he replied, "that the more he endeavoured to form a ſatisfactory idea of the nature of the Deity, the more he found himſelf at a loſs to anſwer the queſtion."

TEACHER! In the early ſtages of religious inſtruction, let then this diffidence and modeſty be your guide. HE is proportionably as incomprehenſible to our limited, finite underſtandings, as *our* minds and motives of action are to the beaſts that periſh, or to the inſect fly, whoſe utmoſt term of exiſtence is a ſummer's day.

Before I proceed further, permit me to ſet before you the opinion of a modern Chriſtian philoſopher on that important ſubject; from whoſe hints I have already derived conſiderable aſſiſtance in the courſe of this work—I mean Mr. Locke.

Speaking of *virtue*, he obſerves, "As the foundation of this, there ought very early to be imprinted on the (*pupil's*) mind a true notion of God, as of the independent, Supreme Being, Author and Maker of all things, from whom we receive all our good, that loves us, and gives us all things; and conſequent to it (that *notion*) a love

and reverence of him. This is enough to begin with, without going to explain this matter any further, for fear, leſt by talking too early to him of ſpirits, and being unſeaſonably forward to make him underſtand the incomprehenſible nature of that Infinite Being, his head be either filled with falſe, or perplexed with unintelligible notions of him. Let him only be told, upon occaſion, of GOD, that he made and governs all things, hears and ſees every thing, and does all manner of good to thoſe that love and obey him. You will find, that being told of ſuch a GOD, other thoughts will be apt to riſe up faſt enough in his mind about him, which, as you obſerve them to have any miſtakes, you muſt ſet right; and I think it would be better if men in general reſted in ſuch an idea of God, without being too curious in their notions of a being, which all muſt acknowledge incomprehenſible; whereby many who have not ſtrength and clearneſs of thought, to diſtinguiſh between what they can, and what they cannot know, run themſelves into ſuperſtition or atheiſm, making GOD like themſelves, or (becauſe they cannot comprehend any thing elſe) none at all."

Let it be obſerved, that LOCKE was not only an eminent philoſopher and logician, but alſo well knew the duties and buſineſs of a teacher likewiſe.

How

How ſoon the firſt impreſſions of the Deity may ſtrike the minds of children, or how early they may form conceptions of a being ſo remote from matter, and of ſuch unlimited perfection I ſhall not undertake to determine. I do not think it among the firſt of our perceptions, nor would I rank it among the lateſt. The *idea* (I do not mean the ſound or word *God*) is not firſt raiſed or engendered in the mind by human information or abſtract laborious reaſoning. Our views of nature excite wonder; wonder awakens curioſity and attention; theſe lead us to a mental perception or diſcernment of beauty and order; by which wherever we ſee them, we immediately apprehend contrivance and deſign, by an internal ſenſe.

From theſe (added to our being occaſionally told by our parents and maſters that there is ſuch a Deity) we naturally conclude that ſome intelligent wiſe and beneficent nature muſt have been concerned in their production. Thus we rather hear and feel at firſt, than *reaſon* that there is a God.

Previous to this natural and ſpontaneous concluſion of the infant mind, all that the teacher has to do, is to inform his pupil ſimply and generally that there *is* a God, who is a great being, that hears ſees and knows every thing, that loves us, and made him and all men, beaſts, birds, fiſhes, trees, and flowers, mountains, vallies, rivers,

vers, ſun, moon and ſtars; and in ſhort every object that has till then come within the ſphere of his obſervation, or become a ſubject of enquiry with him; that he preſerves, governs, and does good to all that he has made; that there is a place of reward called *heaven*, where all good men and children go after death; and that there is alſo a place of puniſhment called *hell*, where all bad men and children alſo go after death. This is enough for him to be told at once, and his queſtions, and doubts about it muſt be anſwered in ſuch a way as to be plainly underſtood by him.

He will naturally aſk why he cannot ſee God—tell him, that He dwells in heaven, far above the ſky, and that therefore we cannot ſee him though he ſees us, till by being good here, we go after death to that happy place where he is. He will not underſtand what you mean, if you tell him yet that God is inviſible.

He will alſo want to know who lives there with God. Your anſwer is, ANGELS, or good beings, who wait upon him, ſing his praiſes, and do his commands, clothed in white robes, and having golden harps in their hands, or as nearly as poſſible to the uſual deſcriptions in Scripture; and the ſouls of good men and children, who go there when the body dies, and is put into the grave.

The ideas of HEAVEN and HELL will have a wonderful effect upon his mind, and induce a variety of queſtions on his part, which the teacher

er will of courſe anſwer conſiſtent with the ſuppoſition of their *locality*; for he would not be able to comprehend any other explanation of them as yet, if indeed there can be any other explanation of them given conſiſtent with ſcriptural authority, which ought always to be the guide of our belief, as well as the rule of our conduct in life.

The idea of DEATH and the SOUL will alſo puzzle him; but he will perhaps underſtand you, if he has had a brother or ſiſter, or any other child of his acquaintance that has lately died; and he has ſeen the dead body or coffin, or the burial itſelf moving to the grave; or is otherwiſe ſatisfied in his own mind, that the child is put into the earth—You may then tell him that though the body is dead and cold in the ground, *that part* of him within his body, which made him ſpeak, run, and play, called the *ſoul*, is gone to heaven, and that if *he* is good, *his* ſoul will go there too, when his body is dead, and put into the grave.

I think it would not be at all an improper leſſon to young children *once* in their infancy to make them feel the cold departed body, ſee it put into the coffin, and even into the grave. The conviction would be ſtrong and the impreſſion laſting, but not injurious even to their tender minds; or at leaſt the coffin and the grave might be ſhewn them, not with expreſſions of horror,

but

but ſimply with expreſſions of ſorrow for the deceaſed, and hopes that his ſoul is gone to heaven, which would naturally make the child reflect and think what it could be, and wiſh to go there too. This early impreſſion might, with many, be uſed as a powerful inſtrument to make them do what is right, at leaſt, I think, the experiment would always be worth the trying.

The difference between ſleep and death might be deſcribed to the child in this plain intelligible way; when the body *ſleeps* it breathes, and is *warm* to the touch; when it is *dead* it is cold, motionleſs and ſtiff: and he ſhould be made to perceive that it is ſo; it will be time enough afterwards to tell him that death is but a ſtate of ſleep till the day of reſurrection.

It may be urged, that there is no neceſſity for ſhewing children ſights of horror, as they will ſee enough of them in after-life: but I muſt be permitted to obſerve, that nothing to them is a ſight of horror, except they are firſt told, or accidentally hear, that ſuch and ſuch things are objects of horror or terror. There is nothing in the ſhrouded body, the painted coffin, or the hollow grave, that can frighten them, if they have not previouſly had that idea of terror impreſſed upon their minds, by the converſation of thoſe about them.

The above deſcribed notions of God, heaven, hell, death, the ſoul, angels, and good and bad men,

men, I conſider as adapted to the firſt ſtage of youthful idea, which, I will ſuppoſe, in general, to begin at five and end at ten years of age. By which time the pupil it is to be ſuppoſed, has read ſome parts of the Bible, underſtands the intent of religious worſhip, and has frequented the church; heard farther of the nature and attributes of the Supreme Being, in the religious converſation of his parents, or teachers, and formed ſome rational idea of his own periſhable frame; the exiſtence and immortality of his ſoul; and the wants to which the preſervation of his corporeal life naturally ſubject him in this world, and the conſequent neceſſity he is under, of placing his dependence upon God, and truſting in him for the ſupply of them.

Moſt children by the time they are ten years of age, have formed ſome tolerable notion of theſe different points; the Lord's Prayer, the Belief, the Catechiſm, their general prayers, and other religious exerciſes, naturally aſſiſting their own thoughts, or the information they procure from the converſation of thoſe about them.

But it is not enough to tell them theſe things, or make them acquainted with them by reading, or to leave them to the uncertainty of accidental converſation for information on ſuch important points; they muſt be taught to reaſon, think and feel, and to convince themſelves of the

the truths offered to their notice. "The main buſineſs of education (ſays Dr. Price) is to teach youth *how*, not *what* to think." And this is to be done in four different ways.

1. By a reference to the works of ART.

2. To thoſe of NATURE.

3. To the information given us in the HOLY SCRIPTURES.

4. To the COMMON OPINION, and CONSENT of *Pagan* as well as *Chriſtian* nations.

The firſt of theſe may be applied to the youthful pupil's underſtanding in the ſecond ſtage of his religious education, which I will ſuppoſe to extend fron 10 to 12 years of age. The other two to the third and laſt ſtage, by which time he will be gradually becoming acquainted with the claſſical authors and Pagan hiſtory, and by that means be enabled to peruſe the Bible with better effect.

A tutor, by walking into the fields with his pupil, or ſtepping into the ſhop of a common mechanic, may give him more inſtructive leſſons than can be learned by books; and it is upon theſe two principles that I would endeavour to demonſtrate, prove, and convince my pupil of the exiſtence of God; and I think I would proceed in this, or ſome ſuch manner—As we naturally aſcend from the *effect* to the *cauſe*, I would ſhew him, as I have obſerved in another part of this work, a watch-maker fitting up a watch,

watch, a ſtatuary carving a ſtatue, or a maſon building a houſe: then aſk him, whether the parts of a watch, ſtatue, or houſe, could have come together of themſelves, or wrought themſelves into their preſent form, without the help of any artiſt. Or, I would give him a bit of clay, and let him mould it into ſomething like a human figure: I would bid him make his chair, or any of his play-things do the ſame; then bid him put life into it, and make it *ſee*, and *ſpeak*, and *walk*. He will need no arguments to convince him, that it required a hand and ſome ſkill to faſhion it after this manner, and a ſuperior power to his own, to accompliſh the reſt. He will *feel* this truth.

I would next bid him look round him, and conſider the heavens with its ſplendid luminaries, the ſun, moon, and ſtars—the earth, with all its beautiful variety of hill and dale, lofty mountains, ſhady woods, and humble vallies, rapid rivers, and purling ſtreams, trees, herbs, flowers, and graſs, birds and beaſts:—then the wide extended ſeas with all their finny inhabitants, and the other native wonders of the deep. Let him conceive of them as forming vaſt manſions for the accommodation of men and beaſts, birds, fiſhes, *&c.* Then aſk him, if he can imagine that they made themſelves, or were reared into ſuch beautiful order, without ſome *directing hand, or powerful artiſt.* When he has fully

fully felt the abſurdity of ſuch a ſuppoſition, I would aſk him, whether he is conſcious that he made himſelf, or remembers the time when he began to breathe and live. He will ſay, No.

Muſt it not then have been ſome other perſon? —Yes.

Muſt not that perſon have been very wiſe and ſkilful, that formed a creature ſo much more beautiful and ſtately than your figure of clay?—To be ſure.

Who provided and cared for you when you was a feeble, helpleſs infant, and ſtill continue to do ſo?—My parents.

Who ſupplied your parents with that milk, thoſe fruits, that fleſh and other food with which they ſupported you?—The plants and animals.

What ſupports them?—The earth, and air, and water.

Did theſe make themſelves?—No.

Muſt not HE then who formed you, be the ſame being that made ſuch proviſions for you? —No doubt.

Do not you and all mankind come from one ſtock, and are you not all maintained on one common bottom?—Yes.

Can he who maintains all, be any other than he who made them all?—No.

Muſt not then the father of ſo large a family be very powerful?—Doubtleſs.

Is

Is he not very bountiful and provident, who has made ſuch liberal proviſions for his offſpring?—Certainly.

By ſuch eaſy ſteps as theſe, teacher! might a child be led to form ſome conceptions of the God of Nature. Nor would I perplex him with nice queſtions about his nature, and manner of exiſting. If he ſhould be puzzled how to think of one who is inviſible and unknown to him, it may be juſt hinted to him, in the ſame interrogating method,—whether he is not conſcious of ſomething within him that directs his limbs, and governs the motions of his body, though not viſible to him; and whether there may not likewiſe be one, who moves and governs the world, the ſun, moon, and ſtars, though undiſcoverable by his naked eyes?

When he is made ſenſible how many wants he has, how richly they are ſupplied, and how many pleaſures and advantages he enjoys, he will eaſily conceive what thanks and gratitude he owes his inviſible Benefactor;—that it muſt be his intereſt to ſtand well-affected to ſuch a Being; to truſt and obey one who has done ſo much for him, and can do infinitely more:—and, conſidering that he himſelf is ſo feeble a creature, and ſubject to ſo many accidents and changes, how much he needs, and how comfortable it muſt be for him to be on good terms

with one who is an almighty, immortal, and ever preſent friend.

When the pupil admires, or is fond of any particular character, he may be aſked for what qualities he admires that perſon? If they are good and amiable, he may be taught to apply them to the DEITY; and aſked, how much more amiable and exalted they muſt be, in one who is above all, who cares for all, and has no intereſt or temptation to be other than kind and good, or to do any thing but what is for the beſt. This will naturally lead him to love and admire, and delight in a character ſupremely great and amiable. In ſhort, every object almoſt which he ſees, and the admirable contrivance of every thing, for beauty or conveniency, and the uſe of all the various ſpecies of creatures with which he is acquainted, may, by proper and eaſy queſtions, lead him up to an almighty and all-wiſe Maker, and inſpire him with the ſenſe of a ſupreme and univerſal PROVIDENCE, than which nothing can have a greater tendency to purify and exalt the mind.

In this manner I would endeavour to tincture my tender pupil's mind, with rational and generous principles of religion; and when the foundations of natural religion are firmly laid, and he has conceived juſtly of his natural connexions with GOD, as his parent, benefactor, and

ſovereign, and of the obligations and duties reſulting from thence; I would ſtill lead him on to larger views and connexions, as his mind opened to receive them; and by means of theſe, more effectually rivet, and ſecure the principles and diſpoſitions already eſtabliſhed; and thoſe leſſons may very properly be introduced, in the third ſtage of the pupil's religious progreſs, when we come to treat of the information given us in the Holy Scripture, concerning the exiſtence and attributes of the Divine Being.

In the mean time it is very neceſſary in this ſtage of his education, having in ſome meaſure already laid the foundations of piety, to be drawing ſome of the principal lines of religion and virtue upon the tender mind; for theſe, if they are not congenial with the mind, may certainly be very early ſtamped upon it; and, when the firſt impreſſions are once fairly made, it is almoſt inconceivable with what difficulty and reluctance they are afterwards effaced. The firſt lineaments of virtue I would draw upon the ſuſceptible ſoul are theſe—

A ſteady regard for truth—obedience to parents and teachers—a juſt ſenſe of right and wrong, and of the dignity of human nature—a ſtrict temperance—a general humanity and benevolence—and, eſpecially, love to one's country, and diligence or induſtry in buſineſs: add to all, a deep *ſenſe of religion*, and of the duties and obligations which it includes; virtues, which

are the native ſources of private happineſs, and of infinite importance to ſociety.—

After thus laying the foundation for teaching the pupil what he owes to himſelf, to his parents, to ſociety, and his country, I would endeavour, in the third ſtage of his progreſs, to convince him of the being of God and his ſupreme government or ſuperintendance of the world, by a reference to the SCRIPTURES; and at the ſame time give him ſome abſtract account of the general dealings of the Creator with man, and particularly, in the redemption of ſinners by JESUS CHRIST.

3. The BIBLE, or holy ſcriptures, evidently corroborate and confirm the proofs we derive from nature of the exiſtence and attributes of God; becauſe he has more clearly and explicitly revealed himſelf therein to our doubting minds.

We are there expreſsly informed that HE *is*, and that he is the rewarder of all them that ſeek him in ſincerity and truth—"I am that I am," ſaith he, in revealing himſelf to Moſes,—"the Lord *God* of your fathers, the God of Abraham, the God of Iſaac, the God of Jacob." Again, "I am from everlaſting, and there is none other beſides me."—"I am the high and Holy One that inhabiteth eternity, without beginning of days or end of years; I kill and I make alive, ſaith the Lord."—"Before the heavens were created, or

ever

ever the earth was formed, I am, ſaith the Lord." —"Before the mountains were brought forth, (ſaith Moſes) or ever thou hadſt formed the earth and the world, even from everlaſting to everlaſting, thou art God."—

He is alſo declared to be the Creator or Maker, Supporter, and Preſerver of every thing we ſee; and is, moreover, in various places of Scripture, deſcribed to us, as an IMMORTAL SPIRIT, every where preſent, all-knowing, and all-ſeeing, filling the immenſity of boundleſs ſpace, with his divine eſſence or ſpiritual ſubſtance; but *inviſible* however to our mortal groſſer eyes; actuating every thing that he has made, as our ſpirits actuate our bodies. *Vide* 139th Pſalm.

He is alſo repreſented to us as all-wiſe, all-good, all-powerful, and impartially juſt; but long-ſuffering, full of tender mercies, and compaſſion to his creatures, whom he preſerves by his unceaſing goodneſs and almighty power; neceſſarily ſevere againſt hardened ſinners, but very merciful to thoſe who repent and amend their conduct.

HIS eſſence is ſuppoſed by DIVINES, to be compoſed of all his attributes, cloſely united in their higheſt poſſible perfection: if you ſpeak of *poiwer*, GOD is it; the very eſſence of power, the ALMIGHTY himſelf—if of *juſtice*, GOD is juſtice itſelf in the ſtricteſt and correcteſt ſenſe—if of *goodneſs*, HE is goodneſs itſelf, and, in all his other

attributes, *ſupreme perfection* is a neceſſary and inſeparable principle of his BEING: for all the emanations of ſpirit, power, juſtice, mercy, goodneſs, immortality, and material excellence, flow from HIM, the fountain and ſource of all perfection, the LORD and GIVER of LIFE;—and as our *minds*, endowed with theſe inferior properties, emanating from HIS perfections, are the *moving principles* of our BODIES, ſo are GOD'S united attributes, or ſpiritual eſſence of being, the moving principle of the UNIVERSE.—May we all therefore habituate ourſelves (no matter in what form of words, or poſture of body) to ADORE with the deepeſt mental reverence this ALMIGHTY MIND; and to conſider *religion*, *reaſon*, and *philoſophy*, as the ſteps of JACOB'S ladder, every one of which brings us nearer to the footſtool of the throne of the GREAT FIRST CAUSE, THE MOST HIGH GOD!

The teacher may quote to his pupil many ſcriptural paſſages, which will perhaps more ſtrongly tend to comfirm in his mind a conviction of the being and attributes of GOD, than any of thoſe I have cited, juſt as they happened to occur to my memory. The BIBLE abounds with numerous and unqueſtionable proofs of what I have advanced; ſuch as the *prophecies* relating to the coming of our Saviour, the diſperſion of the Jews, and the annihilation of JERUSALEM, their metropolis.

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A queſtion, however, may naturally enough ariſe in the mind of the pupil, as to the authenticity of the Scriptures; and as it becomes every one to be able to give a reaſon for the faith that is in him, the teacher ſhould be prepared to anſwer him without heſitation: and I would do it in ſome ſuch way as this;

The divine origin and authenticity of the Scriptures are confirmed, beyond all manner of doubt, by the joint and concurring teſtimonies of thoſe inſpired writers, whoſe united works form that invaluable book which we call the BIBLE, which being interpreted from the Greek, means THE BOOK, ſo named by way of eminence, and as if there were no other book equally worth our attention, the truth of which is I believe univerſally granted.—

The concurring teſtimony and traditions even of the Jewiſh nation itſelf, confirm the authenticity of the Old Teſtament beyond a doubt, though they deny the New. They profeſs to be guided in all their conduct and religious ceremonies by its moral laws, rules and ordinances, drawn up for them under the influence of divine inſpiration, by their great legiſlator, MOSES, who is alſo the writer of the Pentateuch, or 5 firſt books, *viz.* Geneſis, Exodus, *&c.* and conſidered as the firſt and greateſt of the ſacred hiſtorians.

The circumſtances that I have before alluded to, of the fulfilment of the prophecies in the Old Teſtament reſpecting the birth and ſufferings of

our Saviour, the fall and diſperſion of the Jews, and the utter ruin of their capital city, are very convincing arguments of the truth of Scripture, and of our holy religion; and ſo ſtrong are theſe proofs conſidered to be, that the moſt learned, the wiſeſt, and greateſt men that this and other Chriſtian countries have produced, have been unanimous in their firm belief of the holy Scriptures, and towards the cloſe of their uſeful lives, made them their only ſtudy.

If any other arguments need be adduced, the concurrence and traditions of Pagan nations and writers are not among the weakeſt—among them we find the creation of the world, and the golden age, or ſtate of Paradiſe, the general deluge, and ſome other great events recorded in Scripture, introduced with marks of genuine information and belief, not to mention the teſtimony of *Joſephus*, the celebrated Jewiſh hiſtorian, and the circumſtance of the ſacred volume having been handed down to this our day, through a long ſeries of ages, unmutilated and unaltered, having eſcaped the ravages of time, the deva-ſtations and malice of the enemies of the Chriſtian religion, the all-engulphing ſink of the dark ages; the ſavage fury of the Goths and Vandals, who, with fire and ſword, carried irreſiſtible and all-devouring deſtruction before them, ſacking the ſeats of learning, and burning the moſt valuable libraries of the Chriſtian world, of imperial

imperial Rome, and her ſurrounding neighbours. Finally, the Bible has eſcaped the fickleneſs, the ſelfiſh devices, and love of change in men; in the courſe of all theſe long elapſed ages, ſcarcely a word has been added to or taken from it; and where is the book on earth of which that can be ſaid?

4. The teacher may demonſtrate, to the pupil's ſatisfaction, the exiſtence and ſupremacy of GOD over the affairs of this world, by a reference to the opinions and the common conſent of all nations, however barbarous or ignorant; for even the cannibals of America, the ſavages of the iſlands in the South-ſeas, and thoſe newly diſcovered in the Eaſtern Ocean, the Hottentot, the ſooty African, the ſuperſtitious Chineſe, the ignorant Tartar, the idolatrous Perſian—all agree in the exiſtenee of a God, or ſome Supreme Being, whom they worſhip under different forms and ſhapes.

The Romans, the Grecians, and the Pagan nations of ancient times, all believed in a Supreme Being, who preſided over the affairs of men and the inferior gods, whom their fabulous notions, and poetic fictions of the times, had raiſed to that rank, from among the heroes and worthies of the earth.

But ſome of the Roman and Grecian philoſophers, more influenced by reaſon, and more given to reflection than their countrymen, ridiculed

culed the idea of many gods, or the materiality of the Supreme Being; and SOCRATES even went ſo far as to die a martyr to his belief of One God, a ſpirit inviſible, but all-ſeeing, all-knowing, and all-mighty, or powerful.

"The conſent of all men," ſays SENECA, is "of very great weight with us. A mark that a thing is true is, when it appears ſo to all the world; thus we *conclude* there is a DIVINITY, becauſe *all men* believe it; there being no nation, how corrupt ſoever they be, which deny it."

Can any thing be more admirable than theſe ſentiments of Cicero? "That we ought, above all things, to be convinced there is a Supreme Being, who preſides over all the events of the world, and diſpoſes of every thing, as ſovereign Lord and Arbiter; that it is to him mankind are indebted for all the good things they enjoy; that he penetrates into, and is acquainted with whatſoever paſſes in the moſt ſecret receſſes of the heart; that he treats the juſt and impious according to their reſpective merits; that the true means of acquiring his favour, and of being pleaſing in his ſight, is not by the uſe of riches and magnificence in his worſhip, but by preſenting him a heart pure and blameleſs, and by ADORING him with an unfeigned and profound veneration: nor can I think (adds he) *that* man to be in his right mind who is deſtitute of religion."

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"I never had a ſight of my ſoul," ſays the Emperor AURELIUS, "and yet I have a great value for it; firſt, becauſe it is diſcoverable by its operations; and by conſtant experience of the power of God, I have a proof of *his being*, and a reaſon for my veneration."

As to Socrates, it muſt be allowed, that the Pagan world never produced any thing ſo great and perfect. He held admirable principles with relation to the Deity; he agreeably rallied the fables upon which the ridiculous myſteries of his age were founded; he often diſcourſed, in the moſt exalted terms, of the exiſtence of one Supreme Being, eternal, inviſible, the Creator of the Univerſe, and the Supreme Director and Arbiter of all Events; who takes cognizance of the actions of men, and who will infallibly puniſh the guilty, and reward the virtuous.

Theſe examples, ſelected from the heathen world, evidently prove that religion, or the belief and adoration of a Supreme Being, is dictated to us by the light of nature; and I think theſe will ſuffice to prove to the pupil, the exiſtence of God, and his government of the world which he has created.

When the teacher has thus impreſſed upon his pupil's mind the firſt out-lines of his religious faith, he may deſcend more into detail, as to what concerns the works of nature, and

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put before him *Le Spectacle de la Nature*, by BOUFFON; RAY, and DURHAM's Aſtro and Phyſico-Theology, the Religious Philoſopher, STURME's Meditations on the Seaſons, *&c.*: from the peruſal of which, he may, by proper obſervations made to him on the ſubject, be made ſtrongly convinced of the exiſtence of God, and led to admire the wonders of his creating power in every thing he reads of or ſees, however minute and comparatively inſignificant.

After this, he may extend and enlarge his inſtructions on the advantage, propriety, and neceſſity of fearing, worſhipping, and truſting in that Almighty Being, whoſe exiſtence, power, and goodneſs, we have proved, and who claims ſo much of our admiration, gratitude, and love.

What I mean by making all other learning, as much as poſſible, ſubſervient to religion, may partly be ſeen by my obſervations under the head of the Claſſicks, Geography, and Aſtronomy. One more inſtance will ſuffice.

Under the head of Merchants' Accounts,

The teacher ought to make it a point to inculcate upon his pupils, the propriety, advantage, and juſtice, of keeping fair and regular accounts, in whatever line of life they may be engaged; ſtating to them that, in buſineſs, nothing is more indicative of an honeſt man and a good

a good tradeſman, than clear and well-arranged books.—

And he ought not to ſtop there, but, as much as poſſible, ſhould make them keep a regular account of their pocket-money, Dr. and Cr. or titled 'Received and Expended;' that ſo, from their earlieſt days, it may be carried through all their future lives.

He might tell them, that as a mark and principle of *juſtice*, it would be pleaſing in the ſight of God and man, as well as honourable and comfortable to themſelves, in caſe misfortunes in trade ſhould befal them, and their books be ſurrendered to their creditors.

The SACRED WRITINGS are extremely well, and more properly adapted for the advanced pupil to read, as exerciſes in elocution (I have before obſerved, that, on many accounts the Bible is not the proper ſubject of exerciſe in reading for beginners); and at the ſame time, at this *proper* period of his education, as leſſons of religion, morality, wiſdom, and taſte; it is *now* that he will read the Bible with its right effect.

Every man of any taſte muſt admire the bold and affecting ſtrokes of nature, in which this admirable Book abounds. No writings are tranſmitted to us of an antiquity ſo remote, or a genius ſo exalted; and, with them, none have ever appeared in our world, which can bear the moſt diſtant compariſon.

Their

Their ſimplicity of narration, grandeur of deſcription, juſtneſs of characteriſtic painting, dignity of ſentiment, diſintereſted philanthropy, the elegance and nerve which often diſtinguiſhes the ſpeeches and addreſs of their ſeveral interlocutors, have certainly no parallel in any other compoſition; and it is but juſtice to ſay, that in the laſt century, when our beſt writers appeared in ſuch cluſters, and which is juſtly deemed the AUGUSTAN age of Britiſh literature, the Holy Scriptures were regularly taught, and even claſſed as a common ſchool-book in every public and private ſeminary of learning, from the higheſt to the loweſt in the kingdom.

It is certain however that the Bible is now diſuſed for *early* peruſal in moſt ſeminaries of public repute—but why is it? It is becauſe it is an unfit, and, indeed, too eſtimable and precious a work to put into the hands of children or young boys, even of 8 years of age, to ſnivel over and kick under foot, as an exerciſe book; for neglecting their leſſons in which they are very frequently puniſhed, and of courſe early conceive an averſion, if not a contempt for it.

How often does the young boy, leaving ſchool, burn or tear to pieces, with diſguſt and contempt, his Latin Grammar that coſt him ſo many tears, ſo many floggings? How often does the grown man execrate the memory of Lilly's, or any other Grammar that he was puniſhed for neglecting,

neglecting, or had not talents or a turn to get by heart and reliſh? So it is with the Bible improperly uſed.

No! It is for the more advanced pupil, that this ſacred treaſure and work of taſte, is now very properly in my humble opinion, reſerved; at leaſt, I ſhould hope this is the general motive for withholding it—if it is not, I candidly confeſs I cannot ſee any other; and, with Dr. RENNEL, I am ſorry to lament, that, in ſome eminent ſchools, it is almoſt totally diſuſed; than which nothing can be more reprehenſible in the maſters.

There are ſome paſſages in the Bible which, ſeemingly partaking of the marvellous and myſterious, might probably prejudice young readers againſt the whole, from their not having ſenſe or patience enough to compare all its parts and concordances together, and thus form a judgment upon that whole, or *toute enſemble*, and not from partial paſſages.

There are ſome parents and teachers who now begin to entertain an idea that this valuable book, or indeed any religious books, are apt to give young people wrong, or, at leaſt, narrow prejudices, if read and ſtudied before they are of ſufficient age to judge in ſome degree for themſelves: LOCKE ſeems to have been decidedly of this opinion. Probably theſe reaſons may have alſo operated to its partial diſuſe in ſchools, till

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maturer age rendered it more efficacious in its operation.

However, with reſpect to myſelf, while I adviſe the diſuſe of the Bible for *children*, as a book of exerciſe (and at their tender years it can hardly have any other object in view) ſo far from its being my intention to *diſcourage* the young from reading it, it is, I think, the ſureſt way of enabling them to do it with proper effect, when of ſufficient age to guard againſt the faults in reading, which, I obſerved, it generally leads children into; and that by keeping it back for a time it makes a NOVELTY for them, and therefore moſt likely to be ſought after with avidity, and peruſed with delight.

Were I to enter into a diſſertation upon the beauties, the grandeur, and the ſublimity of this *unique* ſacred work, it would occupy more room than the plan of this publication will admit of; but, in a future volume, I mean to enter more at large into this moſt intereſting ſubject.

The *ſtrict* obſervance of the SABBATH is a point that I would moſt ſtrongly recommend to parents and teachers, to inculcate and enforce at an *early* period of education; for, by regularly attending public worſhip, and reading at home on Sundays, young minds are mechanically formed to the habit of continuing it through life, if the maſters to whom they are put

put apprentices, do not ſuffer them to neglect the cuſtom; and, in my opinion, that circumſtance ought to be moſt carefully attended to by parents, in ſuch backſliding apoſtate times as the preſent.

It is a miſtaken notion, that the neglect of public worſhip is a trifling omiſſion; on the contrary, it is a great ſin againſt GOD, and a moſt pernicious example to men; for how is the DEITY to be rightly honoured and worſhipped, or how is the Sabbath to be effectually kept *holy*, but by aſſembling together, and, with one heart and voice, adoring, praiſing, and thanking the GREAT CREATOR for all his goodneſs to us?

Oh! then, let us often *crowd* his TEMPLE gates: let us *chearfully* go up together unto the *houſe* of the GOD of *Jacob*; let us enter into his courts with praiſe, and come before his preſence with thankſgiving and a ſong: let us *teach* his ways unto our children, and make known his goodneſs unto our children's children, and to *their* children, to the lateſt poſterity—then ſhall we not *worſhip* or *faſt* in vain; but, according to his unalterable and inviolable promiſes, he ſhall *proſper*, and *deliver* us out of the hands of our ENEMIES! The Lord of Hoſts, the God of Armies will go forth with us to the battle.

How ſoon it may be proper for youth to attend divine ſervice, is another queſtion; but, I think,

it ſhould not be till they know perfectly the intent of it, can underſtand well what is ſaid, and have learned ſo to conduct themſelves as to be able to join reverently in the ſervice. It is of no uſe to take children to church till they are at leaſt eight years of age; ten, even, I think ſoon enough; but at whatever age the parent or teacher may judge it beſt, according to the abilities, opportunities, and diſpoſition of the pupil, let us always keep in ſight *Solomon*'s excellent maxim, "train up a child in the way that he ſhould go, and he will not forſake it when he is old."

ESSAY

ESSAY

ON

EDUCATION, &c.

As the right education of YOUTH is confeſſedly of the moſt momentous conſequence to a NATION, in a political view; to SOCIETY, in a moral view; and to PARENTS, as well as the PUPILS themſelves, in every pleaſing, uſeful, and advantageous point of view; it becomes the duty of thoſe more immediately intereſted in it to take care that *juſtice* be done to their children, and, at the ſame time, not to grudge the neceſſary expences attending it.

If "education decides the fate of empires;" if "education makes the man;" if "nine out of ten of us are what we are, good or bad, uſeful or not, by our education;" ſurely the right conduct of it ought to be the neareſt and warm-

eſt object of the parent's heart, and the public attention.

Having, in the body of this Work, examined and pointed out the aſſiſtant's or ſubordinate teacher's duties to their pupils, I ſhall, in this Eſſay, conſider the parents' and maſters' duties with reſpect to the education of youth; and the obligations the heads of academies are under to enforce reſpect and ſubordination to their aſſiſtants from the pupils, and to facilitate their already ſufficiently hard duties as much as poſſible.

As to the duties of parents with reſpect to the education of their children, it appears to me, that it is the father and mother's duty, to be *preparing* the child, from a very early age, for his going to ſchool; to make it appear a pleaſant thing, and not a puniſhment, or a ſubject of taſk and diſguſt to him; but, at the ſame time, to impreſs him ſtrongly with the propriety and neceſſity of being obedient to his inſtructors, and paying them the greateſt reſpect; for, of all other things, ſtrict ſubordination is the moſt neceſſary point in a ſchool, as upon it depends the future ſucceſs of a proper plan of inſtruction.

Parents ſhould take particular care about the firſt ſix or ſeven years their children are more immediately under their wing, and if that be done pro-

properly, it will be more eaſy for the maſter to follow it up; for children's minds are like ſoft clay, which is hardened by age, and confirmed by cuſtom, and then your veſſel, whether *honourable* or *diſhonourable*, cannot be altered.

It is evident that at preſent, neither parents nor the heads of academies themſelves, ſufficiently inculcate and enforce ſubordination; otherwiſe we ſhould not find the aſſiſtants, both in young gentlemens' and young ladies' ſchools, ſo much made the ſubjects of boyiſh and girliſh ridicule, as they frequently are, to the utter prevention of all good order, harmony, and improvement.

Nothing is ſo common as for children to relate to their parents and friends at home, how they plague their uſhers (aſſiſtants are *vulgarly* and *degradingly* ſo ſtyled), or teaze *Mademoiſelle*, the French teacher, or Miſs ———, the Engliſh teacher; and theſe impertinent, and, to themſelves, hurtful proceedings, are in a manner ſanctioned by the generality of parents taking little or no pains to convince them of the fault, and puniſh them for it; as if it were a venial and a trifling one: nay, ſome will even join in the laugh, and applaud their children's wit and drollery. Let ſuch parents know, however, that the children who are ſuffered with impunity, to ridicule and inſult a ſubordinate teacher, will, in a very ſhort time, make no ſcruple to

do the ſame to their parents; for the law of nature is not always ſo ſtrongly rooted in the juvenile heart, as not to be violated by degrees, when it is found it can be done without fear of puniſhment; and the moment you even appear to ſanction their ridicule of their teachers, you begin to weaken and undermine your own authority over them, as you will, very probably, afterwards feel to your coſt. If I am wrong in this, let the parents of undutiful and diſobedient children, deny that the countenancing their miſplaced ridicule, is not a frequent ſource of after-ſorrow to them, and I will ſtand corrected.

Nay, to ſuch a height has the ſpirit of juvenile inſubordination and ridicule ariſen in ſchools, that teachers accept employment in them with *fear* and *trembling*, uncertain whether they may be able to remain a month in the ſituation, or not; and in moſt ſchools if they ſtay out the half year, it is thought a great thing: for, in theſe days, the continuance of a teacher does not depend upon the maſter always, or his own good and conſcientious conduct, but on the caprice of the pupils; who, if they happen to be pleaſed with him for a month or two, becauſe he has at firſt too good-naturedly given way to them, the moment he begins to ſet up a will of his own, a combination or conſpiracy is immediately formed againſt him, and he is fairly

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hunted out of his place; and if the principal pretends to take his part, he is told, without the leaſt ceremony, that ſuch a one will leave the ſchool next holidays, or ſuch another will write to his father and mother, and aſk to go to another ſchool, if the teacher is not turned away. Nay, I have heard the boys tell their teachers to their faces, that they would take care and get them turned away. I do not mean to ſay, that teachers are always right, or boys always wrong; but this is the frequent practice in academies, and both parents and maſters ought, moſt decidedly, to puniſh and prevent it.

Were I at the head of a ſchool (which, I am ſure I never wiſh to be, conſtituted as ſome of them are at preſent) I would moſt ſeverely puniſh the firſt boy that uſed a threat of the kind; and, for the ſecond offence, expel him the ſchool with diſgrace; and if that one example was not ſufficient, I would rather ſend home ſix ſuch boys to their parents, than have the trouble of contending with them, and ſuffering them to trifle with my authority, or poiſon the minds of their well-diſpoſed ſchool-fellows. In ſhort, I would rather loſe a dozen ſcholars than give up my claim upon their obedience and ſubordination; for, without that, no good can be done.

I repeat it, that by early inculcating upon children the neceſſary reſpect for their teachers,

and ſhewing them marked reſpect themſelves, parents alone can REMEDY this evil. I conſider it as the firſt preparatory duty that ſhould be attended to: if they can teach their children to ſpell and read before they are ſent to ſchool, ſo much the better; but, at all events, let them be taught obedience, ſubordination, and reſpect to their inſtructors—let them be drilled into it both at home and at ſchool. Subordination is very eaſily kept up in the army and navy, and I do not ſee why it cannot be effectually done in ſchools, if the too fond *papas* and *mamas* would permit it.

If children were ſent very young to PREPARATORY ſchools, which are excellent inſtitutions, they would ſooner learn obedience, reſpect, and good manners, and improve in their education, than thoſe who remain at home to play the maſters, and do as they like, till they are ſeven or eight years of age, and it has become almoſt too late to alter their wrong habits and diſpoſitions.

The worſt thing that a parent can do is to give ear to the tittle-tattle of a child, or to liſten for a moment to his idle ſtories and complaints againſt his teachers. If you have fixed upon a good ſchool, keep him there, and always diſcourage his ſpeaking ſlightingly or diſreſpectfully of thoſe who inſtruct him; nor would I ever convey a meſſage of diſapproba-

tion

tion through him; or permit him to ſuppoſe, that you was diſpleaſed in any reſpect with his teacher; let what you have to ſay be by letter or verbal communication; but never before the child, as it infallibly diminiſhes his reſpect and obedience. It was an excellent obſervation of Dr. Buſby, Maſter of WESTMINSTER School, to King Charles II. that if his boys thought there was a greater man in the kingdom than himſelf, his authority would be at an end.

There are ſome parents who do not take care to teach their children to read, till they are ſo habituated to *vice* and *idleneſs*, that their teachers have as much trouble to bring them to endure their book, as otherwiſe would have taught them to read, had they been begun early;—there is no doubt, but that as ſoon as they can *ſpeak*, they may be taught to *read*, either by father or mother, with eaſe and pleaſure, without ever impoſing it as a taſk upon them; and, if they have not time or inclination to do it themſelves, juſtice to the child requires that he ſhould be ſent to a preparatory ſchool, if their circumſtances will admit of the expence, or, otherwiſe, ſome good day-ſchool in their own neighbourhood; but at all events, he ſhould be taught by *ſomebody*, and thoſe parents who neglect it, even thus early, are unjuſt to their offſpring, and indifferent to their own happineſs.

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With reſpect to thoſe who can afford a better kind of inſtruction, ſending young children to an old woman to learn ſpelling and reading, they had much better let them play at home, for they contract ſuch ill habits, as will coſt their maſter afterwards double the trouble to unlearn them as was requiſite to teach them to read; for my own part, I would hardly undertake to teach them for a double reward: for, to *teach* has ſomething of pleaſure and amuſement in it; but, to *unteach*, has none at all to recommend it. To which I may add, that it not only diſcourages the pupil, but is apt to create in him an averſion to his tutor; and thus both maſter and ſcholar labour in vain. This I am ſure of, from much experience, that an adult, who has had the misfortune to be taught Engliſh in this way, will not be ſo great a proficient in *ſix* months time in learning *Latin*, as another, happy in his *Engliſh* rudiments, may be in *two*; and beſides muſt take a great deal more pains.

When parents are about to ſend a child to ſchool, they ſhould well conſider *who* he is to be entruſted to; for there are *quacks* in teaching as well as in practiſing phyſic. It is not enough that the MASTER be a good *ſcholar*, he ought alſo to be a good *man*. Latin and Greek are only a branch of his requiſite *qualifications*, and that one of the leaſt too of a good maſter

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for young children, whoſe tender minds are to be impreſſed with *piety* and the principles of right reaſon. He ought to be a *virtuous, modeſt*, and *humble man*, very *firm* to his purpoſe, but *good tempered* and *patient*; his chief buſineſs ought to be to diſſipate, by ſoft and gentle means, thoſe unruly *paſſions* that would *obſcure* the early *dawnings* of *infant reaſon*, that it may ſhine out *bright* and *ſtrong*; and, with a gentle hand, to weed out the *tares*, which perhaps were ſown when the parents ſlept, before they are grown ſo high as to choak the progreſs of an *ingenuous* and *liberal education*; in ſhort, to cheriſh the principles of *piety* to GOD, *reverence* to parents, *juſtice* to MAN, *kindneſs* to their ſuffering fellow-creatures, and *love* for their country, till they are grown into ſettled HABITS.

Their next duty is to learn what kind of ASSISTANTS he keeps; what their reputed abilities and conduct, as well as their principal's mode of treatment to them; for a great deal depends upon the teachers, and they ought to be more noticed than they are by parents; it would not be loſt upon them. I beg it to be obſerved, that I am not an aſſiſtant in a ſchool myſelf; but that I write impartially, and unbiaſſed by any other motive than that of truth.

It is alſo the parents' duty to enquire, from time to time, into their children's proficiency, and, as far as they can, examine them in all the branches

branches of their education, cenſuring or encouraging them as they find they deſerve it; but never ſuffering it to be ſuppoſed by the child that his backwardneſs is the maſter's fault; if it really be ſo, that is a ſubject to be privately diſcuſſed with him, and not before the child; if you are even obliged to remove the pupil, do not let him know the real cauſe, though you may inform his ſucceeding maſter.

There is a charge often brought againſt parents, and I believe with ſome reaſon: it is, that of frequently removing their children from one ſchool to another upon the ſlighteſt grounds, and ſometimes none at all; but nothing tends ſo much to leſſen the maſter's diligence, becauſe he cannot tell but another may reap the fruit, and have all the credit of his care and pains: it likewiſe much retards the child's improvement, for being put into one method by his firſt maſter, into another by the ſecond, and perhaps into the firſt again by the third, or probably into a freſh one; by theſe means he loſes ſome years, and is not at laſt, ſo good a proficient as if he had been continued with any one of the three.

There ought to be very great and cogent reaſons, indeed, to induce a parent to remove his child, if he has been a conſiderable time under a maſter, and eſpecially when the pupil reſpects him, though he make but ſlow proficiency under him.

Many

Many parents of good fortunes, and even ſome of high rank, give their children but very mean and ordinary educations, becauſe they are loth to be at any very great expence about it: of this PLUTARCH vehemently complains in his time, in theſe words:—

"Many people are grown ſo covetous, ſo careleſs of their children, that, for fear of paying a greater price, they chooſe men of no abilities for their tutors, thus purchaſing for them a cheap ignorance."

The ſame author mentions a ſharp reply of ARISTIPPUS, who being aſked by one of theſe ſaving parents, what he would charge for his ſon's education—"A thouſand drachmas," replied the philoſopher.—"Oh, Hercules!" cried the other, with great aſtoniſhment, "*why I can buy a good ſlave for that money*;"—"*Well, and ſo you may*," replied Ariſtippus; "then you will have two SLAVES, the ſlave you have *bought*, and the ſlave you have *begot*."

To ſuch parſimonious fathers, I will only put a queſtion or two, to convince them, that the laying out their money on their children's education, is not incompatible with their own maxims.—If you had a piece of land that was very barren and ſtony, but, with a little cultivation, would be as good as any of your neighbours', would you grudge your money there, where there was a proſpect of a conſiderable advantage?

Would

Would you not rather immediately order your bailiff to manure and cultivate it? And, is the cultivation of your ſon's mind a matter of leſs conſequence, from whence probably you may derive much more profit as well as credit and pleaſure, than from the tillage of your field?

Or, if you have a conſiderable ſum of money by you, are you not apt to be uneaſy till you have put it out to intereſt, lent it on mortgage, or wiſely turned it into land? Becauſe you naturally ſay within yourſelf; let fires, loſſes at ſea, change of government, or any, or all of theſe happen, this will ſtill remain; I ſhall have this for a certainty to leave to my ſon. Yet, though the land, as you ſay, will ſtill remain upon the ſpot, you know very well how very *moveable* and eaſily transferrable a ſkin or two of parchment is.

One would think then, that if you could hit upon a purchaſe more ſecure, and more advantageous too for your ſon, you would not grudge to lay out the money upon it; and if you aſk me what that is, I anſwer, *a virtuous and learned education*; and of that too, if you are as careful about it as in other matters, you may have a very good pennyworth for your penny, only remembering that the *beſt* is always the *cheapeſt*.

There are other parents, whoſe fondneſs and indulgence will hardly permit them to ſuffer their children to be out of their ſight, much

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leſs to go to a ſchool; for they obſerve, that they are not ſure they will be ſo indulged, or treated with that care and tenderneſs they are at home. And what then? Suppoſe they ſhould not, where would be the harm of it? It is not at all improbable but the inuring them to a little more hardſhip, may in a great meaſure contribute to their health, by ſtrengthening and confirming their conſtitutions.

This the *Lacedemonians*, *Romans*, and other ancient warlike nations knew, and therefore were particularly careful to avoid bringing up their children in effeminate ſoftneſs and indulgence: and certainly whether we conſider it with reſpect to their bodies or their minds, this delicate and over-tender treatment of children muſt be very pernicious to them: it makes their conſtitutions weak and infirm, ſubject to catch cold with every little breath of air, and their health often various and uncertain all their life long. And, with regard to their minds, they muſt not be croſſed nor contradicted; they muſt have their humour in every thing. What a piece of barbarous cruelty is it in parents to ſuffer theſe paſſions to gain ſtrength in their children, the breaking them of which will coſt them ſo dear, and *dearer*, if never broken!

It is certain that a good teacher or tutor may manage a child to his advantage both ways much better, becauſe it is probable he will never ſuf-

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fer thoſe irregularities in his diet, play, or ſleep, which the ill-timed and pernicious indulgence of many parents often winks at, and oftener ſees not; as too great or too little a weight, too quick or too ſlow a motion, often put this delicate machine out of order. He will ſooner perceive the firſt riſing of any diſorder or tempeſt in the paſſions, and ſo may diſſipate and ſcatter them with more eaſe, that they may not obſcure the *ſky* of their dawning *reaſon*, before the bright SUN of their *virtue* can well be perceived to be riſen in their *horizon*.

It is alſo the duty of parents not to ſend their children to a maſter who undertakes more than he has time to manage, and by receiving many *pupils*, ſends out the fewer *ſcholars*. The parent who ſends a ſon to a maſter, whoſe time and labour is to be divided amongſt many, can hope for but little to fall to his child's ſhare.

It is alſo another duty of parents to have their children only taught ſuch branches of learning as their capacities are equal to, and their probable deſtination in life may render proper and neceſſary; for it is only loſing time and labour to endeavour to hammer Latin and Greek into a boy's head, if he has not ſufficient abilities to make them eaſy to him; and, in this point, the maſter's opinion ſhould be the parent's guide, for he is the beſt judge. Nor is it of any

any uſe to give them an education ſuperior to the ſphere of life they are to move in (except their abilities are particularly promiſing), or to employ their time in that which will be afterwards loſt upon them.

Another very important duty the parent has to diſcharge, and that is, the choice of a proper trade or profeſſion for his ſon, ſuch as ſuits his ſtrength, capacity, and inclination; for all theſe three circumſtances ſhould be conſidered, and taken into the account.

There hardly ever yet was a boy at ſchool who had formed a particular wiſh of his own, or exhibited a natural turn for any particular trade, art, or profeſſion, and was ſuffered by his parents to embrace it, but what ſucceeded in it: but where boys have been croſſed in their choice by parents, innumerable are the inſtances of failure and miſcarriage in life; as far therefore as the ſituation and circumſtances of parents will permit, they ſhould always be guided in the choice of an occupation for their children, by the turn and wiſh they may have; for nature is almoſt always right, and we cannot thwart her without injuring the youth.

Since I have grown up, I have often recollected with admiration, that, when a boy, five or ſix of us would get together, and play at *parſons* or *ſchool-maſters*, or any thing elſe as it might happen to be the humour; and what is remarkable

is, that the parſon or ſchool-maſter was ſure to be the cleverest boy, and the beſt ſpeaker or ſcholar, always judiciouſly and ſpontaneouſly ſelected by the common conſent of the reſt, and the clerk in general the ſtupideſt fellow. Indeed, in every other profeſſion, art, or trade, which became the ſubjects of our imitation and amuſement, the choice of the actors was equally judicious; and, in almoſt every ſchool, you will find a juvenile carpenter, trunk-maker, gardener, ſmith, painter, *&c.* diſplaying their early turn, and employed by their ſchool-fellows to do their jobs, as regularly as you would employ one of the trade at home. So much better and diſcerning in theſe reſpects is the unbiaſſed native judgment of boys, than the prejudiced, blind, and partial opinions of fond and indulgent parents.

There hardly ever yet was a boy at ſchool, but his cotemporaries there could pretty early foretel what he would turn out in life, and what occupation would beſt ſuit his talents and inclination. Before they determine to what trade or profeſſion their ſons ſhould attach themſelves, it would not be a uſeleſs idea for parents to conſult the MASTERS, and to make inquiry as to the general opinion of their ſchool-fellows on that head, and be guided in a great meaſure, by their's

their's and the maſter's. I really think it would oftner prove right in the end, than the parents' own choice; for boys at ſchool will always be giving ſome early proofs of their particular bent or talent, and their play-fellows, before whom they act without reſtraint, and to whom they more openly and confidentially diſcover themſelves and their riſing views, are the beſt judges of them and their abilities, as well as of their particular inclinations and wiſhes.

It certainly is very proper, that parents ſhould, from time to time, inquire of the maſter what their childrens' particular bent appears to be, and what their capacities, that they may be guided by them in what the child is to be taught, and what he is to be brought up to; and, as far as their circumſtances will allow, the pupil's own choice ſhould be complied with.

Dr. HUARTE, a learned *Spaniard*, in an excellent book he publiſhed on the ſubject of Education, recommended, that in all well-regulated ſocieties, there ſhould be proper officers to try the capacities, and examine the inclinations of children, before they were tied to the ſtudies of literature, or to any other employment: for natural inclinations, aſſiſted by proper rules and induſtry, would ſupply the nation with men eminently ſkilful in their reſpective callings; but, for want of ſuch public examina-

tions, ſchool-maſters and tutors might, if they acted conſcientiouſly, in a great meaſure make up this deficiency, as the *Jeſuits* uſed to do very carefully in their ſchools, by obſerving their pupils' inclinations and capacities: for *though* they cannot preciſely tell for what calling a dull boy may be proper, yet we may fairly venture to aſſert, that nature never intended a block-head to improve the arts and ſciences: but, for want of ſuch early inquiries, we find among mechanics men of ſuch excellent parts, that had they been properly cultivated, would have made them eminent ſcholars; ſo we may alſo ſee many graduates and maſters of arts, who make but a wretched figure in the learned world, though, in all probability they would have diſtinguiſhed themſelves had they entered into the army or navy. Inſtead of this (ſays the ſame author) our ſchools never trouble themſelves with ſuch diſquiſitions, but, like *Noah's* ark, receive all kinds, *clean* and *unclean*.

As the pupil advances in his ſtudies, the parents ſhould be very particular in ſeeing that his religious and moral inſtruction are alſo attended to by the maſter and his teachers; and when there appears to be any want of attention and reſpect to his inſtructors, or any complaints made againſt him for inſubordination and diſobedience, I think the beſt and moſt effectual cure for

for it would be, to make him ſtay at ſchool a week or a fortnight, according to the degree of his fault, after his ſchool-fellows are gone home for the holidays—once or twice repeated, he would behave well afterwards; nor ſhould the parents' falſe or ill-timed tenderneſs abate him a day of the appointed time; and, in this buſineſs, both maſter and parent ſhould go hand in hand.

When their children are at home for the holidays, parents ſhould exhort and adviſe them to be obedient and ſubmiſſive to their teachers, attentive to their inſtructions, and careful to pleaſe them; not to take notice of or ridicule their little defects, and, above all, never to ſay any thing to their hurt or diſadvantage: nor ſhould parents liſten to any ſuch converſation, but immediately put a ſtop to and diſcourage it.

In ſhort, if parents would have their children well educated, tenderly treated, and done juſtice to at ſchools, they muſt early do *their* part, by preparing, or cauſing them to be rightly prepared for it, and by always inculcating upon them reverence, reſpect, and ſubmiſſion to their teachers, and totally diſcouraging every thing in them that has a tendency to promote ridicule, diſreſpect, or inſubordination.

Till that is done ſchools will never be rightly or advantageouſly conducted, except the prin-

cipal has more ſpirit, independence, and authority, than is in moſt academies permitted to fall to their lot.

The duties of the maſter and his aſſiſtants are already ſevere enough, without making them ſtill more ſo by the whim and caprice of parents, or the almoſt countenanced diſreſpect and diſobedience of their children, who might be taught and compelled by their parents to act a different part, did they begin early enough with them, and before the evil has got to too great a height to remedy it, or even to ward it off from themſelves.

While I am ſpeaking of the ſevere duties of ſchool-maſters, I beg leave to intimate to parents in general, that the diſadvantages they labour under are ſo great, as to have induced ſome of the moſt reſpectable of them, to form themſelves into a ſociety, termed the "SOCIETY OF SCHOOL-MASTERS," for the purpoſe of raiſing a fund to provide for their ſuperannuated brethren, whom age, infirmity, or misfortune, may render incapable of purſuing their occupation, and for the benefit of the widows and children of deceaſed ſchool-maſters.

For further particulars of it, I muſt refer the reader to their printed Addreſs to the Public, which, I believe, may be had at the *Crown and Anchor* Tavern, in the Strand; or of Mr. KELLY, the Secretary, at the Academy in Finſbury

Finſbury Square, to whom all Letters are addreſſed at the Crown and Anchor.

I beg leave further to mention, that they ſolicit ſubſcriptions from the public as well as from their own body; and that it appears to me that parents who can afford it, and pupils who have been ſucceſsful in life, by means of a good education, ought to give their mite towards ſuch a laudable purpoſe; I am well convinced, that upon peruſal of their affecting appeal to the public, many liberal-minded perſons will be induced to encourage and recommend it.

It is proper for me here to obſerve, that I am neither a ſchool-maſter, nor a member of the ſociety, nor in any the leaſt degree intereſted in or connected with it; but, as a private teacher, I conſider it as a neceſſary and laudable inſtitution, that ought to be encouraged by parents and pupils alſo, when they have it in their power. I conceive it to be the beſt mode and opportunity they can have of ſhewing their gratitude, for the frequently much under-paid exertions of their conſcientious maſters.

Some plan of mutual relief, by raiſing a fund among themſelves, and ſoliciting public ſubſcriptions, as well as from their grown-up pupils (I mean after they are ſucceſsfully ſettled in life) is not unworthy the attention of *aſſiſtants*

in ſchools, who probably ſtand as much in need of ſuch an inſtitution as their PRINCIPALS; and I would ſeriouſly recommend them to call a meeting on the ſubject, and take it into conſideration.

The MASTER'S firſt duty with regard to his pupils, is to conſider himſelf in the parent's place in every reſpect, and not only to inſtruct them in the uſual branches of ſchool learning, but in religion and morality likewiſe, forming their manners and taking care of their health as if they were his own children. He is not to give them any prejudices againſt particular modes or forms of worſhip: as the pupils grow up, he is not only to teach them conſcientiouſly, but to do it with good temper, patience, and kindneſs; and not to undertake more than he can do juſtice to, either by himſelf or his aſſiſtants; in the choice of whom he ought to be very particular as to abilities and character.

The head of an academy ought himſelf to be well verſed in thoſe branches which he undertakes to teach, and facilitate the ſtudies of his pupils and the duties of his aſſiſtants, by judicious arrangements of the buſineſs.

A maſter ought to ſtudy every pupil's diſpoſition, and raiſe his attention, and excite his exertions by thoſe motives which he perceives to

to operate the ſtrongeſt with him. It is certain that childrens' paſſions, as well as thoſe of older people, are excited by different methods and motives; and whilſt a maſter continues ignorant of thoſe particular motives by which every ſcholar is to be worked upon, he muſt very often be at a loſs, let his general method be ever ſo good.

It is alſo his duty to examine well their capacities and turn of mind, and to ſuit their ſtudies to their abilities, and the inclination which they ſhew towards any particular occupation or profeſſion, provided it be agreeable to their parents' views, and conſiſtent with their circumſtances; and even where parents judge wrong, it is his duty to ſet them right, as far as a modeſt opinion and recommendation can go—nor ought he to diſguiſe the truth with reſpect to their children's real abilities, diligence, or diſpoſition, by any unneceſſary flattery, or fear of offending either parent or child.

It is his duty not to put obſtacles in the way of children's improvement, by any ill-timed harſhneſs or ſeverity, or by obliging them to learn what they are not equal to, and nature never intended them to be taught: it is of no uſe to attempt to make the child get the Latin grammar, or 50 lines of an author by heart, where he has neither memory nor inclination on his ſide, to aſſiſt him in the taſk. The ſame rule applies

applies to other branches. I believe many boys are ſeverely puniſhed for not doing impoſſibilities; but, it is to be hoped, the maſters of the preſent enlightened day, will now completely lay aſide the pedantry of the middle of this century even, when *Lilly* himſelf was almoſt out of date, though all the *Hydras* of youth were not then deſtroyed.

When bad principles, long indulged, are grown into habits, and a maſter has in vain, for a long time attempted to weed them out with his hand, there may be occaſion for the ſpade or pick-axe to root them up at once; but that being once done, ſuch violent remedies ſhould never be uſed again; for, correction, like phyſic, where it does not operate, generally does harm. Few, I believe, have been flogged into virtue and learning; but many, from my knowledge, have been whipped and frightened from them. It is the maſter's duty to excite by emulation and rewards, and not by terror.

If any one thinks that children are not to be governed without the diſcipline of the rod, and the ſeverity of reprimands, I am ſure he only *thinks ſo*, and has never tried the experiment. *Pedants* ſo often join together the *idea* of a *rod* and *book*, that I have always conceived *that* to be the cauſe of their bad ſucceſs in teaching.

Finally, it is the maſter's duty to implant early in his pupils' minds a great reverence for their

their parents, and a love of their country, teaching them to be affectionate and kind to their friends or relations, juſt and benevolent to all mankind, and eſpecially thoſe who are poor and diſtreſſed.

Extract from CARDINAL WOOLSEY'S *Inſtructions to the Maſters of his endowed School at Ipſwich.*

" In the firſt place, I think proper to put you " on your guard, that tender youth are neither " to ſuffer ſevere whippings, nor ſour-looking " threats, nor any kind of tyranny; for, by ſuch " treatment, the *fire of genius* is either *extinguiſh-* " *ed*, or, in a great meaſure, damped.

" Sometimes the mind is be relaxed, and la- " bour to be mixed with diverſions; but ſuch " diverſions as may become a gentleman, and a " man of letters. *Pleaſure* is to mingle even " with ſtudy itſelf, that the boy may think learn- " ing rather an amuſement than a toil: parti- " cular care is to be taken not to hurt the genius " of a boy by over-ſtretching it, nor to fatigue " him by too long leſſons. Both extremes are " hurtful.

" Beſides, you are to take care, in ſchool, " that your pupils ſpeak as correctly as poſſible; " you are to applaud the excellent, and to mend " the incorrect."

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As I have endeavoured to ſhew, that the reform in academies, with reſpect to the pupils' behaviour to the aſſiſtants, ought to originate with the parents; and as I have proved that it is both a duty incumbent upon them, and a manifeſt advantage to their children too, I ſhall next ſhew how far the MASTERS have it in their power to follow it up, and even enforce it rigidly, though the parents may have neglected to do their parts—and alſo how it will tend to *eaſe* and *facilitate* the aſſiſtants' duty.

The firſt duty of the maſter of an academy, upon his receiving a pupil into his houſe, is to explain to him the regulations of the ſchool, and to inform him, that the greateſt deference and reſpect is expected from him, in particular to the aſſiſtants, as well as obedience and ſubordination in general to the laws of the academy; that this is conſidered as the firſt ſtep towards becoming a ſcholar, and reaping the advantage his parents had in view by ſending him there; and that any deviation from that line of conduct will be ſeriouſly noticed, if not immediately puniſhed. And the maſter ought to keep his promiſe moſt ſtrictly and decidedly, if he ſhould loſe the pupil.

This is the firſt duty a maſter owes to himſelf and his aſſiſtants, or repreſentatives; it is the grand *hinge* upon which EDUCATION is to move, and, without it, all will be jarring diſcord, confuſion,

fuſion and perplexity, with neglect of buſineſs, and indifference to the children's improvement.

The maſter's next duty is ſo to arrange his pupils' ſtudies, that they may be fairly divided among the aſſiſtants, and no more put upon one than another: nor ought he to undertake a greater number of pupils than he means to do perfect juſtice to, by keeping a proportionable number of teachers to inſtruct them. It appears to me that 30 pupils require two aſſiſtants, and an additional one for every 20 beyond that number.

I have obſerved in a former part of this work, that maſters ſhould be very careful in ſelecting well qualified aſſiſtants, and of good characters: which having done, they can have no heſitation to entruſt them with the power of moderate puniſhment; for indeed the giving them that authority is the only way to render the exerciſe of it unneceſſary: and, in every exertion of that authority, the maſter ought to ſupport the teacher.

It is alſo the maſter's duty to repreſent to the parents, from time to time, the neceſſity of their diſcouraging every thing in their children's conduct, that tends to defeat the purpoſes of ſubordination and good order; and to aid and aſſiſt him by their commands, exhortation, and advice; and even by parental diſpleaſure and puniſhment, where theſe fail of their effect.

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The head of an academy ſhould never find fault with, or cenſure his aſſiſtants before the pupils, if they deſerve it; that ought to be done in private; for the contrary conduct will infallibly leſſen, and by degrees, ruin their authority.

The maſter having once allotted to his aſſiſtants their ſeveral pupils or claſſes, and pointed out to them what they are to be taught, ſhould never *publicly* interfere with them in their mode of teaching, whatever he may do in private; nor ſhould he be continually changing his method or altering his plans; but do every thing in his power, by judicious arrangements, and conſiſtent perſeverance in them, to *facilitate* the buſineſs to his teachers, and, in particular, not to divide their attention too much at once, by multiplying the objects of the pupils' ſtudies.

The maſter's next duty is to give the aſſiſtants every reaſonable indulgence, and not to make a practice of obliging them to turn out of bed and teach at 6 in the morning without a fire, while he lies ſnug in his bed till 8 or 9 o'clock, as I have ſeen it frequently done—nay, ſome carry it ſo far as to oblige their teachers to begin at 7 in the morning, in the depth of winter, by candle-light, as if there were not hours enough in the day-time for inſtructing youth.

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This practice is injurious to the pupils, and makes a teacher a downright ſlave; it is high time to aboliſh ſuch an unreaſonable and abſurd cuſtom, which neither forwards the children a whit the more nor benefits their health. In ſummer it is very well to riſe and begin at 7 o'clock, and breakfaſt at 8; ſooner is quite needleſs.

The only advantage maſters derive from this practice is, that *they* are thought to be diligent while it is their poor aſſiſtants who have all the extra inconvenience, without a particle of the profit.

Some maſters will alſo take it into their heads occaſionally to be very diligent, after making an excurſion from home of 3 or 4 days, and keep both pupils and aſſiſtants an hour or two after their regular time, who are thus to do penance for their principal's having made a holiday or two. I have actually witneſſed this unreaſonable trick in a maſter—the period of ſchool hours ought to be held ſacred to teachers, whatever the principal may chuſe to do for his own pleaſure or ſatisfaction.

Another circumſtance that diſguſts good teachers from going into academies, is that flaviſh and really unneceſſary attendance upon the pupils in their hours of play, which is expected of them; the preſent apparent neceſſity of which ariſes from that great ſource of all evil in ſchools, want

want of proper reſpect and ſubordination being ſtrictly enforced and kept up by the maſter, for fear of looſing a ſcholar or two, and that he may have the character of being gentle and good natured, which in my opinion it is very far from turning out in the end to be; for let a laxity of diſcipline be once ſuffered to get a-head, early puniſhment would have been mercy, compared to the meaſures he is at laſt, perhaps, obliged to reſort to, and without anſwering the purpoſe. It is then he finds, perhaps too late, that he has ſacrificed his independence and authority to a miſtaken idea, and his ſchool dwindles away without hope of retrieving it.

The only way for maſters to eaſe their aſſiſtants in this reſpect is, to render it unneceſſary, by puniſhing the offenders with well-timed ſeverity, and conſidering it more his own part of the duty; appointing the ſenior boys in turn, to act as monitors over the reſt, as it is the practice in all great public ſchools.

The attendance of all the teachers on *Sundays* is alſo conſidered as a great hardſhip; and it ſhould be ſo regulated as to leave one of them at liberty in turn.

The attending them to their bed-chambers at night, might alſo very well be diſpenſed with, as it is more the footman's duty than the teacher's.

The ſitting with them in the ſchool throughout the long winters evenings, is a very tedious taſk, and

and ought to be alleviated as much as poſſible, by the maſter's being there among them whenever he can, and eſpecially at ſupper and prayer-time, which latter duty ſhould never be neglected; but be made a ſolemn, ſacred cuſtom in every ſeminary for youth: they ſhould begin and end the day with prayer.

In ſome ſchools the aſſiſtants are obliged to attend while the dancing-maſter is teaching, which is conſidered as quite foreign to their duty, as indeed it is; either the maſter or miſtreſs ſhould be there themſelves, as I have ſeen it ſometimes done.

In ſome ſchools, it is a practice to make the teachers breakfaſt with the boys on milk and water to their bread and butter, inſtead of tea. If the maſter wiſhes his aſſiſtants to be reſpected by the pupils, he ſhould always have them at his own breakfaſt table, and make a point of helping them firſt at dinner; inſtead of which, they are oftener obliged to wait till their pupils are ſerved.

The walking out with them is alſo a very troubleſome duty to the teachers, and ought to be alleviated as far as poſſible, by the maſter frequently accompanying them, or at leaſt never obliging more than one at a time in turn, to go with them.

Many of theſe duties cannot be altogether diſ-

penſed with, but they may be greatly eaſed, and ought to be ſo.

The frequent diſmiſſion of aſſiſtants at the holidays, and only paying them up to that date, is alſo conſidered to be an unfair advantage taken of them by the meaner claſs of maſters of academies; for they argue very properly, that though the pupils are abſent two months or more in the year, yet their parents pay the full and utmoſt ſum agreed upon without any deduction—and that as the maſters have that advantage from *all* their pupils, they ought not to deny the teachers their board and lodging in the holidays, if they retain them; and if they diſmiſs them they ought to pay the month's wages, and make an allowance for their board and lodging too during that time; becauſe they cannot get into employment again till after the vacation. It is true, that when ſervants are diſmiſſed, they have only a month's warning or a month's wages; but their caſe is perfectly different, for they can *immediately* be engaged in another place, but teachers muſt wait the end of the vacation, and maſters never give them a month's warning *before* the holidays, for fear of being inconvenienced by a change, in caſe they ſhould take umbrage and leave the ſchool immediately. I think it is but reaſonable that both the before-mentioned allowances ſhould be made.

The

The amount of ſalary to teachers, ſhould, I think, be proportioned to the terms upon which the boarders are received; for it is hard that where *one* pupil only, pays the maſter 60 guineas for board, lodging, and education, beſides other little profits derived from him, the aſſiſtant ſhould only receive 25l. or 30l. with perhaps indifferent board, bad ſmall beer, and lodged in a room with three or four or more boys; but certainly the ſalaries ſhould alſo in ſome meaſure be proportioned to the abilities of the teacher.

Moſt maſters make a charge in their Chriſtmas bills for uſhers and ſervants, under pretence that it is a perquiſite or *douceur* regularly divided among them, as a general preſent from the pupils; and the reaſon aſſigned by maſters for this is, that were it to be given perſonally by the children, it would induce more or leſs improper partiality on the part of the teachers, according to the ſum given by each.

There is reaſon to think that ſome maſters put all this money in their pockets, and this circumſtance has always been viewed with a ſuſpicious, jealous eye, by aſſiſtants in general; I think it would be much to the credit of the profeſſion, to clear it up, by putting the matter upon ſome certain footing, ſo as to do away all doubt and queſtion about it.

Probably, if they were to divide all the entrance-money among their teachers, as it is now

practiſed at a moſt reſpectable academy in *Finſbury-Square* in lieu of that charge on the parents and retaining it for themſelves, it would do away all the evil.

Maſters generally wiſh to ſhew their ſchools, or rather the number of their pupils, to the beſt advantage in the neighbourhood where they live, both at church and in their holiday afternoon *promenades*.—It is upon theſe occaſions that their good and genteel behaviour is wiſhed to be noticed; but how can that be expected, when they are ſent out with a teacher, of whom, ſo far from ſtanding in awe, they make a jeſt or play their tricks upon him; and in their conduct, have the appearance rather of a parcel of rude, ignorant, and noiſy pariſh boys, or a troop of bears broke looſe from their *Savoyard* keepers, than young gentlemen of genteel manners, educating under teachers, to whom they owe every deference and reſpect, and ought to be under the greateſt ſubordination to. I have ſeen ſome badly managed ſchools of that deſcription, diſturb a place of worſhip by their noiſe and indecent behaviour, or inſult every perſon they have met with in their walks.

All this happens becauſe the teacher has not ſufficient authority given him, whatever the maſter may promiſe to the contrary, and becauſe he does not puniſh when the teacher juſtly complains.

Another

Another matter that ſhould be attended to by the maſter, is to enforce proper reſpect from his *ſervants* to the aſſiſtants;—for that is a point in which the ſervants in academies are ſo notoriouſly deficient, that I have been aſtoniſhed to ſee the inſolence of their conduct, and have naturally been led to wonder, at the ſame time, how maſters could expect their pupils to reſpect the teachers, and profit by their inſtructions, when a poor ignorant illiterate clown of a footman, or a drab of a kitchen-wench, have been permitted with impunity, to affront them before their pupils, and leſſen them in their eyes. I have known very reſpectable aſſiſtants obliged to leave their ſituations, becauſe they could not get redreſs for the inſults of ignorant ſervants.

A clerk, porter, or journeyman in any trade whatever, is far more reſpectably treated by both maſters and ſervants, than the ſubordinate inſtructors of youth are; and whoſe fault is it, but the principal's? No other perſon's, I am ſure. It may be ſaid his teachers do not behave well, and bring it upon themſelves, by making too familiar with them at firſt, and then reſenting the return of that familiarity, when the ſervants are diſpoſed to be affronted or to ſhew their airs.—Why then, let the maſter diſcharge that teacher, and admoniſh the next not to make free with the ſervants; and, if the ſervant takes any improper

proper liberties with the aſſiſtants, let him or her be diſcharged for others, that, upon being informed of the reſpect with which he wiſhes his aſſiſtants to be treated, were it only for the boys' ſakes, will have ſenſe enough to conform to their maſter's views.

I am putting it merely upon the footing of advantage to the pupils; for how can any maſter of an academy expect his teachers to eaſe his labours, or be of real ſervice to his ſcholars, if he does not pay them marked reſpect himſelf, and enforce it in his ſervants.

I believe no thinking perſon, who knows what the general practice in academies is, can deny that there is not ſomething very much amiſs at preſent in the relative ſituation of parents, maſters and aſſiſtants, and that it ſtands much in need of a compleat reformation. I ſhall be extremely glad for the ſake of all parties, if any hints that I have ſuggeſted here, or in the courſe of this work, can at all tend ſo far to convince parents and maſters of it, as to induce them to ſet about an immediate alteration in their ſyſtem.

There are ſome academies where the maſters, acting with proper ſpirit and independence, enforce that due ſubordination and ſubmiſſion both to themſelves and their aſſiſtants, which is the foundation of all right education, and I ſhould heartily wiſh to ſee it more generally practiſed; than

then would the teachers' duties be eaſy, if not pleaſant, and much facilitated, if not perfectly made ſmooth—compleat perfection cannot be expected in any thing, but we ſhould endeavour to approach as near to it as poſſible— and that is our *duty*, our *intereſt*, and our *wiſdom*.

On the 17th of January, I went out of curioſity to the *Cannon Coffee-houſe*, Portland-Road, in conſequence of an advertiſement in one of the morning papers of the 15th (ſigned J. G.) for a *gentleman* to teach Latin and Greek, and to aſſiſt in writing and accounts, at an academy a few miles from Town. After waiting ſome time, I was introduced to the Advertiſer, who in the preſence of a clergyman with him, informed me that the ſalary was 25l. a year, out of which the *gentleman* was to find waſhing, and to board and lodge himſelf during the two holiday months, as he (the maſter) made it a rule not to keep his teachers in the holidays—obſerve that maſters have no deduction made by their pupils friends for the vacation months, and are even paid extra if they remain at ſchool.

Now let us ſuppoſe 2s a week for waſhing; that amounts to 5l. 4s. and one guinea a week for board and lodging, during the two holiday months, which are generally ſpun out to ten weeks; that will make 15l. 14s *per ann.* and being deducted from 25l. will leave 9l. 6s. for the *gentleman* to keep his pocket, and to buy clothes, linen, hats, ſhoes, and other neceſſaries!

I ſhall

I ſhall forbear to make any comment upon this fact, which came within my own knowledge; but I hope both parents and maſters will give it a ſerious thought; and that ſomething will be done to render their ſituations in ſchools more advantageous to the aſſiſtants, by which means YOUTH will be better taught, and more reſpectable men induced to enter into the employment. I muſt ſay that I think the remedy can only be applied by parents, and it muſt be done by an increaſe of pay to the maſters, who will then be without excuſe for under-paying their teachers. — I allude to all annual ſums paid for the board and education of youth, under 50l. a year, which ſum I conceive ought to enable maſters to give their aſſiſtants from 60l. to 40l. each according to their abilities; but to expect an aſſiſtant to teach Latin and Greek, beſides other branches, for 25l. a year, is taking an undue advantage of diſtreſs and the times.

FINIS.

W. Blackader, Printer, 10, Took's Court, Chancery Lane.

APPENDIX.

AFTER I had finiſhed that branch of this work, which relates to the ſelection of proper books for the three ſtages of juvenile progreſs in the Engliſh language, ſome very uſeful works, publiſhed by R. PHILLIPS, of St. Paul's Church-Yard, and the eſtabliſhment of a JUVENILE Library, by Mr. TABART, in New Bond-Street, have very forcibly attracted my attention; and I ſhould feel myſelf wanting in my duty to parents and teachers to omit recommending them in the ſtrongeſt manner.

At the Juvenile Library a catalogue may be had (price 1s. or *gratis*, to thoſe who purchaſe to the amount of 5s.) of the beſt modern publications, adapted to the ſeveral ſtages of juvenile inſtruction, in all the various branches of ſcholaſtic education.

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It is ſufficient for me to obſerve, that theſe books are all ſtrongly ſanctioned by the favourable opinions and recommendation of the REVIEWERS, as well as by the extenſive ſale they have already had.

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